

To: Unicode Technical Committee  
 Title: Towards a Unicode encoding for Stokoe Notation  
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## 1. Introduction

This document is intended to introduce Stokoe Notation to the UTC with the hope that UTC will be able to give guidance in the best process for encoding Stokoe Notation.

At this point we have not attempted to engage experts from all users of Stokoe Notation. We have been in touch with a Stokoe Notation user from each language (with the exception of Hong Kong Sign Language) with varying degrees of engagement. Once the issues raised in this document are addressed we will begin a greater effort of engaging all parties.

### 1.1. Outcomes

Our hope is that UTC will be able to give direction on the following:

1. Should Stokoe Notation be disunified<sup>1</sup> with Latin?
  - a. Handshapes (dez) – should Latin (A..Z, etc) be encoded? See section 3.1. If unified with Latin, where should the handshapes that still need encoding be put...in Latin blocks or in the Stokoe Notation block?
  - b. Parts of the Hand or Contact (con) – should the superscript numbers and letters be encoded? See section 3.2.
  - c. Location symbols (tab) – should bracket lookalikes (), {}, [] be encoded?<sup>2</sup> See section 3.3.
  - d. Combining marks – should lookalike (◌̇, ◌̈, ◌̉, etc) characters be encoded? If not, which block should the unencoded ones be added to? See section 3.4.
  - e. Handshapes (dez) within sig (superscripted within brackets) – should these be encoded again or let smart rendering handle it?<sup>3</sup> See section 3.10.
2. Should Hong Kong Sign Language (HKSL), Signed Swedish (SS) and Dutch Sign Language (DSE) be included in this proposal? Because of significant extensions, the creators of both DSE and SS believe they should not be considered Stokoe Notation. This question will ultimately have to be answered by the user community, but it would be helpful to get input from the UTC.
3. If disunified (from Latin), a block of approximately 32 columns should be assigned to Stokoe Notation.

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<sup>1</sup> We would encourage disunification from the Latin script for the following reasons:

1. There is no case relationship between “upper case” and “lower case” looking characters (such as “B” and “b”). This is evidenced by Stokoe requiring a complete set of “Latin looking” capitals but only a few lower case letters. In addition, Stokoe is clearly a caseless writing system.
2. The proportion of overlap between Latin and Stokoe is low and pretty much only extends to the base (handshape) characters. Thus to reduce impact on the Latin script of some 400+ characters being added, and particularly the three control characters, it would be best to disunify.
3. There is no intention to use Stokoe for IDN. The only overlap between Stokoe and Latin is derivational. The function of the letters has completely changed.

<sup>2</sup> These are not punctuation, they represent a location on the body and should probably be encoded.

<sup>3</sup> We would suggest that these not be reencoded, but let smart rendering handle the superscripting and whatever shaping may be required.

To aid in this decision of whether to unify with Latin or not, the Unicode charts at the end of this document have highlighted characters that could be considered to be in Unicode already.

## 2. Introduction to Stokoe Notation

Stokoe Notation is a system for *describing* sign language. It is not a system for *writing* sign language. One might compare it to the International Phonetic Alphabet in that it is used as a descriptive language and not as an orthography. Stokoe Notation is used in dictionaries, some linguistics books and research papers; having it in Unicode will be of great benefit for the research community. At this point it seems unlikely to be widely used by the Deaf except in academic circles.

Stokoe Notation was first described in 1960 by William C. Stokoe. Stokoe was the first person to actually document that a sign language was a language in its own right. He later published a dictionary (1965) for American Sign Language (ASL) using this notation. In general, his original system used existing characters on typewriters that could be re-used, however they clearly have different semantic uses. Subsequently, Stokoe Notation has been taken and (greatly) expanded by several other sign languages including British Sign Language (BSL), Italian Sign Language (LIS) and Signed Swedish (SS).

Thus, we are currently aware of four significant dictionaries using Stokoe Notation. These are Stokoe's own ASL dictionary from 1965 (346 pages), Brien's BSL dictionary of 1992 (1084 pages), Radutzky's Italian Sign Language dictionary of 1992 (1011 pages) and the Signed Swedish dictionary of 1998 (600+ pages). Tang produced a 703 page dictionary for Hong Kong Sign Language (HKSL) which does not use Stokoe Notation in the standard way. However, it does use handshapes (*dez*) for sorting entries and superimposed on handshape photographs are movement (*sig*) symbols. Some of the handshapes use a few combining marks and there are a few movement symbols which are not in other Stokoe Notation dictionaries and we are including those in this document. Each of the dictionaries that use photos or drawings also use movement arrows and symbols superimposed on the photo or drawing. They are well documented in the LIS, SS, HKSL and BSL dictionaries. As graphical objects it is unlikely that they would be included in a final proposal, however, the Signed Swedish movement arrows and symbols are included in the charts at the end of this document.

Stokoe Notation is written left to right. A sign is always from the signer's point of view.

In the original Stokoe Notation, there were three types of symbols described. Stokoe dubbed the three types of symbols *tab* (for "tabula" or place, location of hand), *dez* (for "designator" or handshape), and *sig* (for sign action or motion). Symbols were intended to be written in strict tab-dez-sig order. Stokoe used superscripted and subscripted *sig* symbols. He called them all *sigs*. In extended usage of Stokoe, the *sig* symbols are consistently superscripted and stacked. Subscript usage has been extended to define hand arrangement (*ha*) and orientation (*ori*) symbols. Contact (*con*) symbols are very infrequently used for parts of the hand. With the extension of Stokoe Notation in this way and because some sign languages commonly use two hands this strict order is not always followed. We provide here an example of Stokoe Notation.

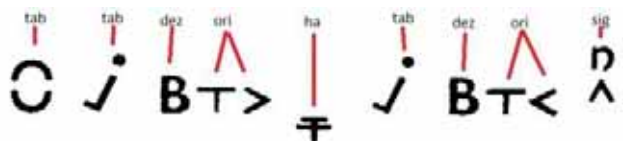


Figure 1. BSL. Brien, page 29.

In order to see how the dictionaries actually use Stokoe Notation, we list here dictionary entries for "earth" or "world" from five sign language dictionaries.

W̄ JW<sup>OX</sup>  
 (initial dez, and tab; same formation as 'year' and 'universe')  
 N x world.

Figure 2. ASL. Stokoe 1965, page 270.

1418 ∅ B<sub>OL</sub> IX B<sub>OL</sub> <sup>OX</sup><sub>a</sub>



Figure 3. BSL. Brien, page 698.

MONDO, TERRA, MAPPAMONDO  
 "Nel mondo ci sono molti problemi ecologici.  
 Il pianeta Terra è tra Marte e Venere.  
 Per studiare la geografia è utile avere il mappamondo."  
 La seconda variante, di MONDO, è usata soprattutto nel  
 significato di INTERNAZIONALE.

Cat. Gramm.: sost.

Sinonimi:

-

Varianti:

5<sub>L</sub>A<sub>L</sub>I 5<sub>L</sub>A<sub>L</sub>∅<sup>OX</sup> H<sub>L</sub>I H<sub>L</sub>∅<sup>OX</sup>

B̄<sub>L</sub>A | B̄<sub>L</sub>A ∅<sup>OX</sup> 741.3



Figure 4. LIS. Radutzky, 741.3.

5d-15



地球 earth, 世界 world (noun 名詞)

IF: | S<sub>L</sub> Palm Y<sub>L</sub>to | | S<sub>L</sub> SCon(Hand:Bk) Y<sub>L</sub>to | Y<sub>L</sub>  
 | H1 | POri | | H2-place | POri | POA

PF: H1 [ Arc Trace Dist Sup ]  
 Path SetC OriC ]

Example:

古時 人 誤會 地球 平面,  
 Ancient people misunderstand earth flat,

圓形 不  
 round not

'以前的人誤以為地球是平而不是圓的.'

'People in the ancient time misunderstood the earth to be flat, not round.'

5

Figure 5. HKSL. Tang, page 617.

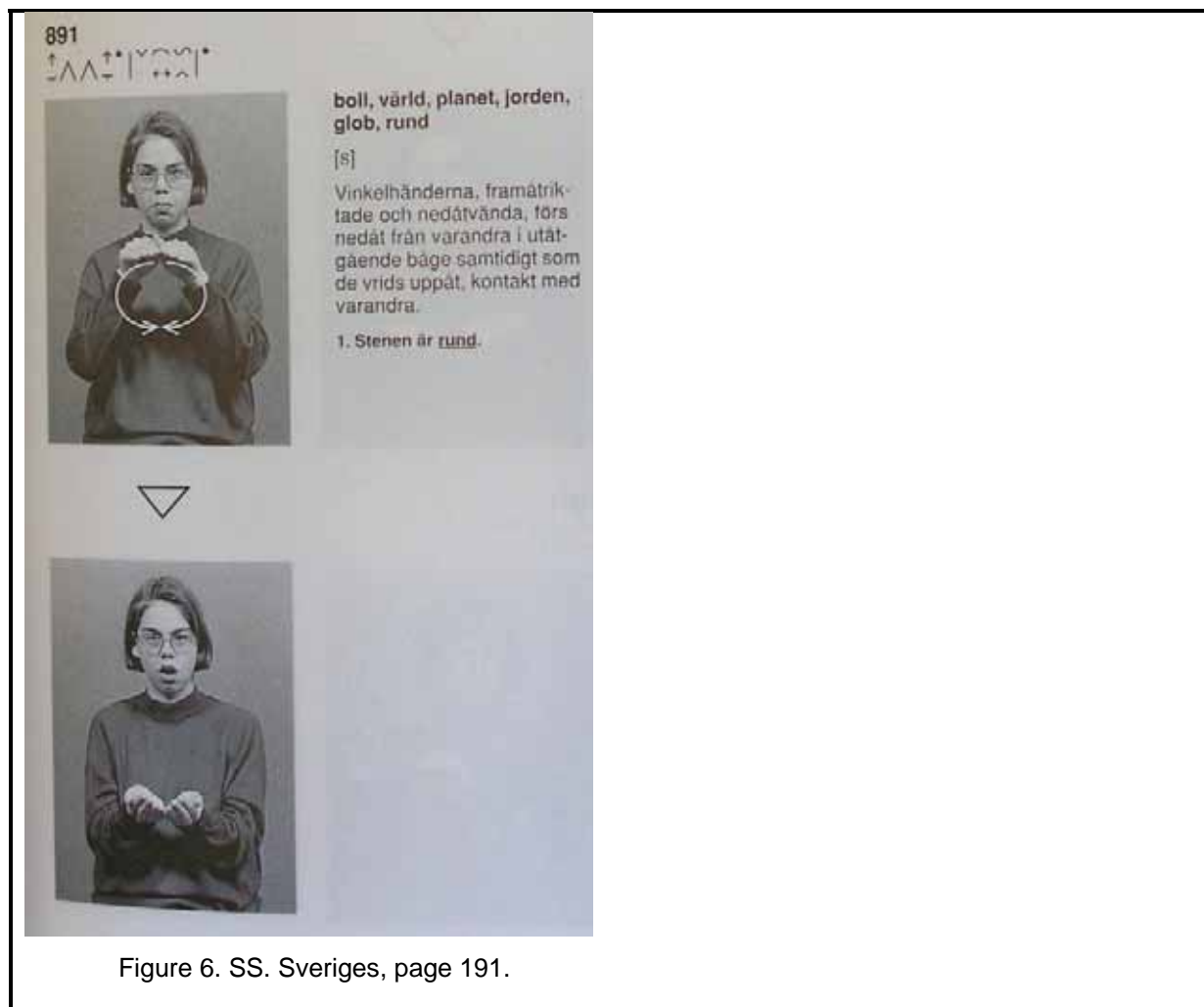


Figure 6. SS. Sveriges, page 191.

### 3. Description of Stokoe Notation Symbols

The following sections relate to the characters used by Stokoe Notation and we include discussion on characters that are straightforward and characters that are problematical.

Although most uses of Stokoe require the characters to be placed in *tab-(con)-dez-(ori)-(ha)-sig* order, the *dez* (handshapes) symbols are almost always documented first. Thus, our draft charts encode the *dez* symbols first.

#### 3.1. Handshape (*dez*)

The *dez* symbols show the shape of the hand. The sign language dictionaries we have reviewed typically use Latin characters and digits for the handshape (HS) sometimes followed by one or two diacritics. Sort order varies. Stokoe attempted to follow a Latin based sort order and BSL, LIS, SS and HKSL sort by handshape. This later order is geared toward the deaf. The chart currently follows a Latin-based order. However, if these characters are encoded, it is likely we will attempt to follow an order based on handshape.

The handshape characters are primarily upper case Latin-looking characters (A..Z+), most digits and other characters that are not anywhere in Unicode. We anticipate that these would have a general category of “Lo”.

In this section we also include a few lower case Latin-looking (b,d,e,g,m,n,o,p,s) characters, superscript and subscript characters. At this point we are not sure where they belong. They could perhaps be better considered as modifiers to the handshapes. It's difficult to evaluate what their general category should be until we complete the analysis.

It should be noted that Stokoe does not use case, the “lower case Latin-looking” characters are not be case pairs with the “upper case Latin-looking” characters.

The only rendering required for the handshapes is that they can take up to four combining marks (up to three above and one below). An exception to this “simple” rendering requirement is that a *dez* can appear within a *sig* between brackets. This means the *dez* is smaller than the regular size. See figure below.



Figure 7. BSL. Brien, page 86.

Action 1a: should Latin (A..Z, etc) be encoded?

### 3.2. Parts of the Hand or Contact (con)

The “parts of the hand” symbols are used in BSL and DSE. Kyle calls these *con* (for contact) symbols. Brien just labels them as “Parts of the hand.” One or more *con* symbols can appear in front of *dez* symbols.

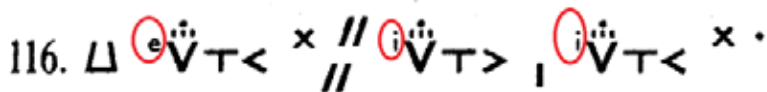


Figure 8. BSL. Brien, page 33.

Action 1b: should the superscript numbers and letters be encoded?

### 3.3. Location (tab)

Location symbols show the *place* or *tabula (tab)* where the sign is made. They are fairly straightforward. The only rendering required is that they can “carry” a combining mark.

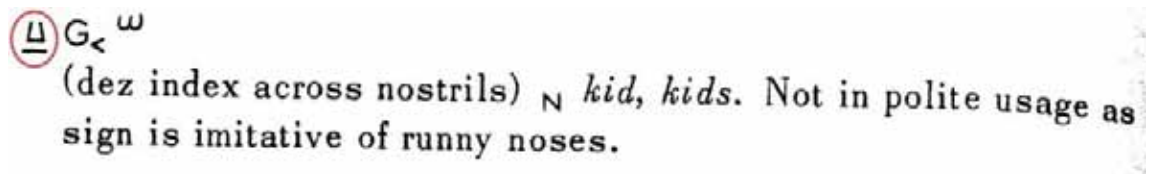


Figure 9. Example of combining mark below a tab (nose). ASL. Stokoe 1965, page 138.

There are several characters that could be encoded as “pieces” rather than as a unit. They are sometimes used individually and sometimes as a whole. However, these characters have the potential to also carry combining marks. For example, in Signed Swedish we have “eye” (□) and “eyes” (□). The symbol for “eyes” can have a combining mark above it and thus it must be encoded as a unit.

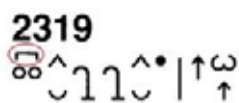


Figure 10. SS. Sveriges 1998, page 503.

Despite the fact that some of these appear similar to characters already encoded in Unicode (see brackets below), we believe they should all be encoded in the Stokoe Notation block. This is because location symbols serve a distinct semantic purpose which is completely different from the similar looking characters.

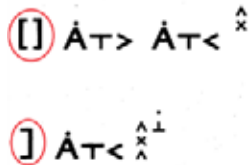


Figure 11. BSL. Brien, page 199.

The tab symbols we believe should be encoded are listed in the chart at the end of this document. In general, the symbols are listed in logical order beginning with the ‘neutral space’ in front of the signer’s body, and then moves from the top of the head downwards. The list ends with the hip symbol. At the very end are symbols only used by one sign language.

**Action 1c:** should bracket lookalikes (), {}, [] be encoded?

### 3.4. Combining marks

This seems an appropriate time to discuss combining marks. Combining marks are most often used on the *dez* (handshape) symbol although they can also be used with the *tab* and in Italian Sign Language with the *sig*.

Combining marks must be able to stack (up to three) and position properly over (or under) a *tab*, a *dez* or a *sig* symbol.

**Action 1d:** should lookalike (◌̇, ◌̈, ◌̉, etc) characters be encoded? If not, which block should the unencoded ones be added to (Stokoe Notation block or Combining Diacritical Marks Supplement)?

### 3.5. Orientation (ori)

The next group of symbols gives *orientation* information, describing the way the handshape is held. In BSL, the first symbol gives the direction the palm is facing (from the signer’s point of view). The palm may be facing up or down, etc. The second symbol gives the direction the fingers are pointing (again, from the signer’s point of view).

The BSL *ori* symbols do not require any unusual shaping behavior. ASL and LIS have them subscripted, BSL has them on the baseline.



Figure 12. LIS. Radutzky, 105.3.

One unresolved issue is that BSL (and LIS) have a set of palm orientation symbols and a set of finger orientation symbols. Several of the symbols are the same glyph, however, depending on whether it is “palm” (first) or “finger” (second) position, they have different meaning. Since analysis and dictionary usage requires sorting it is likely that we would request that the palm orientation symbols be encoded separately from the finger orientation symbols.

The *ori* symbols are further complicated because SS uses similar shapes with *different meaning* and both SS and DSE will require some sort of shaping behavior. These issues will have to be addressed with the language communities.

### 3.6. Hand arrangement (ha)

Hand arrangement (*ha*) symbols are for when two hands are required for a particular sign. They tell you about the arrangement of the hands: side by side, one above the other, and so on. These symbols do not have one fixed place in the notation as a whole, so you have to look out for them carefully. There are two combining marks used in the Hand arrangement. These are a line above or a line below. These combining marks sometimes appear over (or under) a *tab* symbol or more often with the *dez* symbol. The *ha* combining marks are in a fixed position above the handshape and may have other intervening combining marks. See Figure 13 below.

The other symbols are subscripts and do not require any special positioning. However, they may be slightly offset and larger than the *ori* symbols in order to differentiate between them. They are a completely separate set of symbols from the *ori* symbols.



Figure 13a. BSL. Brien, page 84.

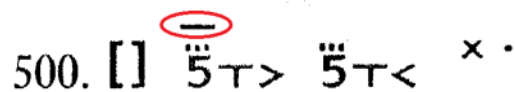


Figure 13b. BSL. Brien, page 97.

### 3.7. Movement (sig)

*sig* symbols describe the “sign action” or movement the hands make.

Depending on the language usage, *sig* symbol rendering can be quite complicated.

In this first example one can see that when there is just one *sig* the preferred position is superscripted:

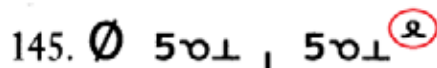


Figure 14. BSL. Brien, page 38

A *sig* symbol under another (vertically) indicates simultaneous motions. Stokoe himself (in the 1965 ASL dictionary) only used two symbols vertically (with the exception of the dot above diacritical mark, which will be discussed later). BSL can have at least eight sigs stacked vertically.

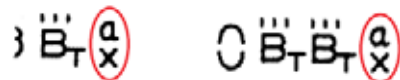


Figure 15. ASL, page 174

A *sig* symbol to the right of another (horizontal) indicates successive motions: the movements happen one after another (starting with the left-most symbol). Radutzky (LIS) only uses horizontal sigs (with the exception of the dot above diacritical mark) with somewhat different meaning. See section on compound signs for further description of how she uses *sig* symbols.



Figure 16. LIS. Radutzky, page 32

As mentioned earlier, Tang uses *sig* symbols in her handshape photographs.

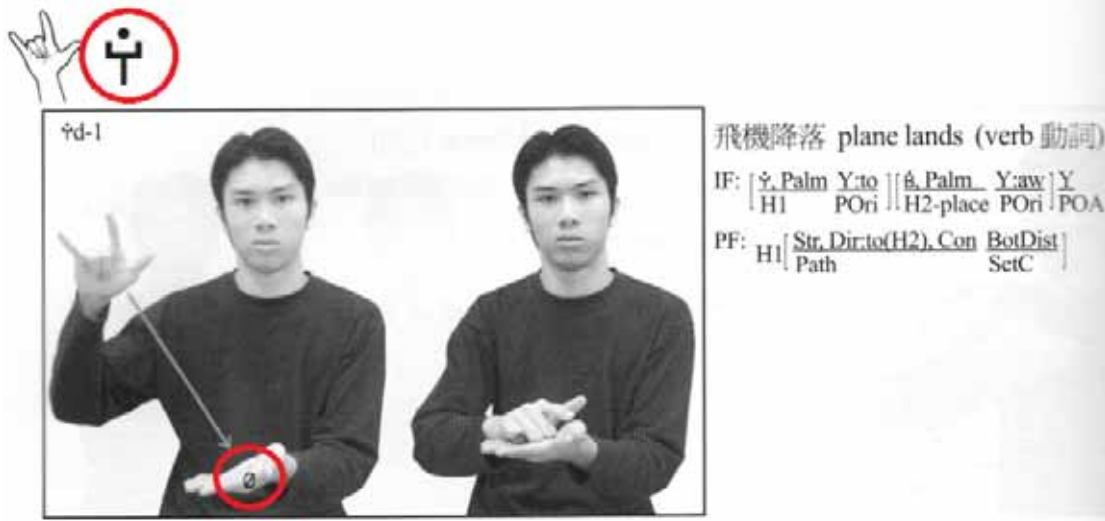


Figure 17. Horn handshape and neutral space sig. HKSL. Tang, page 358



Figure 18. circle sig. HKSL. Tang, page 216

### 3.7.1. Special movement symbols

Some movement symbols (*sig*) deserve special mention.

A single dot diacritic (indicates the movement is sharp) can occur above the *sig*. It will always appear at the top of a set of *sig* symbols, never within.

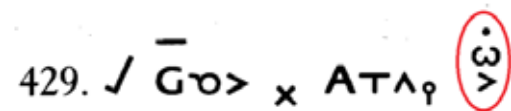


Figure 19. BSL. Brien, page 90

A single dot placed to the right of a *sig* indicates the movement is repeated. This will always be to the right of the *sig* and never between vertical sigs. The dot is always to the right of whichever movement is repeated. If the whole thing was repeated many times the movements would be bracketed and the dot placed outside of the bracket (see Figure 29).



424.  $\cap$   $j$   $B_{T\wedge}$   $j$   $B_{T\wedge}$   $\begin{matrix} \cap \\ \perp \\ \div \end{matrix}$

Figure 20. BSL. Brien, page 90

If there are two dots it means the action is repeated more than once or is continuous. Rather than encoding another character, we suggest just using STOKOE MODIFIER MOVEMENT-REPEATED two times in order to indicate is repeated more than once or is continuous.

$\bar{B}_{>\wedge}$   $\bar{B}_{<\wedge}$   $\cap$   $\begin{matrix} \cap \\ \cdot \\ \cdot \end{matrix}$

Figure 21. LIS. Radutzky, 87.2

Another *sig* that deserves special mention is STOKOE MODIFIER MOVEMENT-ALTERNATE. This indicates that the *sig* action of the hands in a double-dez sign is done first by one then by the other. This sig is always to the right of another sig (except when there is also a STOKOE MODIFIER MOVEMENT-REPEATED – that is always furthest right).

360.  $\emptyset$   $\ddot{G}_{\perp\wedge}$   $\ddot{G}_{\perp\wedge}$   $\begin{matrix} \cap \\ \perp \\ \perp \end{matrix}$   $\sim$

Figure 22. BSL. Brien, page 82

BSL uses two others, STOKOE MODIFIER MOVEMENT-SHORT and STOKOE MODIFIER MOVEMENT-SHORT AND SHARP. These are also always above the sig.

363  $U$   $G_{<\wedge}$   $\begin{matrix} \times \omega [A] \\ \perp \\ \vee \\ \# \end{matrix}$   $\begin{matrix} \circ \\ \perp \\ \vee \end{matrix}$

Figure 23. BSL. Brien, page 9

### 3.7.2. Complexities of sig

Finally, we wish to demonstrate some of the complexities of the sig. While the symbol set itself is fairly defined, the rendering is not.

This example demonstrates the use of two simultaneous sigs at one time with three successive sigs.

29.  $\Upsilon$   $A_{>\vee}$   $A_{<\vee}$   $\begin{matrix} \wedge < \wedge \\ \times \vee \times \end{matrix}$

Figure 24. BSL. Brien, page 22

However, this is not the limit. Here we see eight simultaneous sig symbols with one being repeated.

117.  $\Delta$   $\ddot{V}_{T\wedge}$   $\begin{matrix} \circ \\ e \\ \perp \\ \vee \\ x \\ e \\ \perp \\ \vee \end{matrix}$

Figure 25. BSL. Brien, page 33

Another example shows multiple simultaneous and successive sigs:

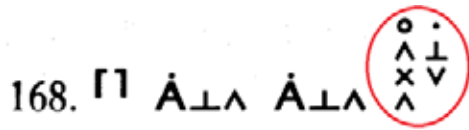


Figure 26. BSL. Brien, page 42

In the example below, one can see that the first sig is in a superscript position, the second sig is next to it (horizontally) with the simultaneous sig underneath it and it is repeated. Simultaneous action is underneath the relevant sig.



Figure 27. ASL, page 36

Next we will see that handshape symbols (*dez*) can be used in the *sig*. These are within square brackets.



Figure 28. BSL. Brien, page 86

Handshapes [HS] are used in sigs and we need to decide how (or whether) they should be encoded.

**Action 1e: Handshapes (*dez*) within sig (superscripted within brackets) – should these be encoded again or let smart rendering handle it? (I feel these should not be reencoded. I believe that when Handshapes and Combining Marks are between STOKOE MODIFIER MOVEMENT-LEFT/RIGHT SQUARE BRACKET they should resize to match the *sig* characters.)**

There are stretchable parentheses. Within the double *dez* signs section of any handshape, signs which have a secondary location (that is, signs which behave like manual tab signs but must be held or moved in a particular location) are placed at the end of the handshape section. These signs are distinguished by brackets separating the secondary location symbol from the rest of the notation.

It is clear that the *sigs* are complicated and they are most complicated in the BSL usage.

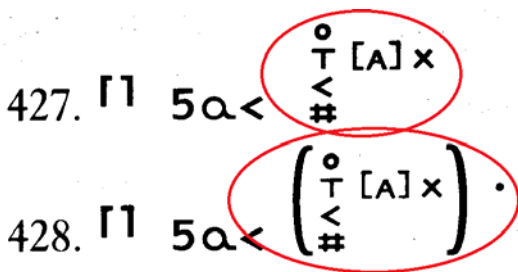


Figure 29. BSL. Brien, page 90.

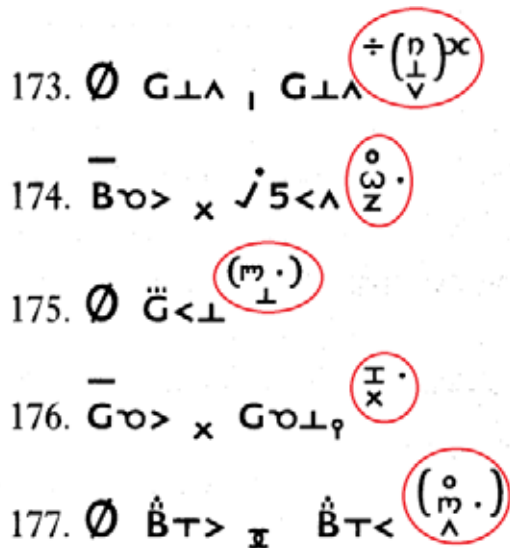


Figure 30. BSL. Brien, page 42.

### 3.8. Compound Signs

Next, we come to two compound signs. STOKOE DIVIDER-HANDSHAPE separates the components of a two-part sign (where there is a handshape change).



Figure 31. ASL, page 2

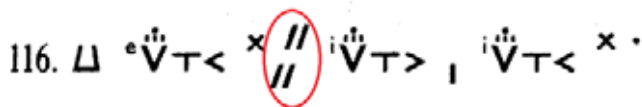


Figure 32. BSL. Brien, page 33



Figure 33. LIS. Radutzky, 94.2

In Italian Sign Language, the (horizontal) sigs are simultaneous. However, there must still be a way to indicate successive (or sequential) movements, especially where the point of contact is in a different position. Instead of stacking the sigs vertically as ASL and BSL do, LIS uses STOKOE DIVIDER-MOVEMENT to indicate sequential movements (Radutzky, page 28 and 31).

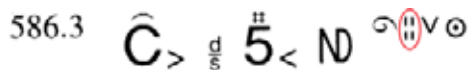


Figure 34. LIS. Radutzky, page 2

There are other “divider” symbols that still need evaluation: /, +, :, [, ], (.). While they look like regular punctuation they do serve another semantic purpose and will need careful review as the proposal is developed.

### 3.9. Other

Other arrows and graphical symbols will be addressed later with the Stokoe Notation community.

### 3.10. Shaping and Control Codes

At the moment, our current thinking is that each *sig* would start at the top and the next *sig* would appear below.

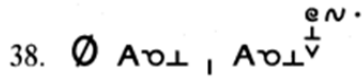


Figure 35. BSL. Brien, page 24.

The sig in Figure 35 would then be encoded as:

e	+	~	+	•	+	⊥	+	∨
E542		E5A9		E5AA		E535		E532

E5A9 and E5AA are stored after E542 because the alternating and repeating movement are always to the right side of the sig.

Next, at least three control codes will be needed. When you want the next *sig* to appear in the next column, you would use a “then” statement. An “open” and “close” would be used for when the *sigs* are tied together with stretchy parentheses.

- E5F7 STOKOE CONTROL OPEN
- E5F8 STOKOE CONTROL THEN
- E5F9 STOKOE CONTROL CLOSE



Figure 36. BSL. Brien, page 42

The above example (*sig* part) would be encoded as:

∧	+	×	+	∧	+	○	+	⊥	+	∨	+	•
E531		E522		E531		E5A6		E5F8		E535		E532
												E5A7

E5A6 (short) and E5A7 (sharp) are stored at the end of the simultaneous column of sigs because they refer to the action as a whole.

This system is essential for BSL. It makes it a bit more tedious for other Stokoe Notations that do not require shaping. For example, since LIS uses the *sigs* horizontally and not vertically, it would require the use of the “then” in between every *sig*.

Next we will show several more complex examples followed by the suggested storage:

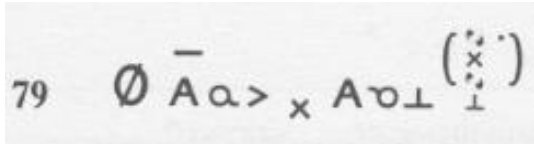


Figure 37. BSL. Brien, page 162

o	+	“	+	⊙	+	×	+	”	+	c	+	⊥
E5F7		E541		E5AA		E522		E541		E5F9		E535

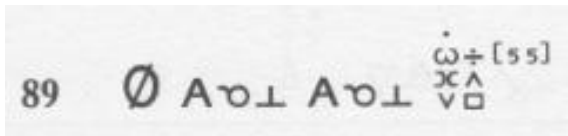


Figure 38. BSL. Brien, page 166

ω	⋈	∨	⊙	T	÷	^	□	T	[	5	5	]
---	---	---	---	---	---	---	---	---	---	---	---	---

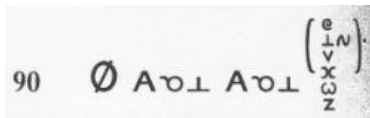


Figure 39. BSL. Brien, page 166

o	e	⊥	⊙	∨	⋈	c	⊙	ω	Z
---	---	---	---	---	---	---	---	---	---

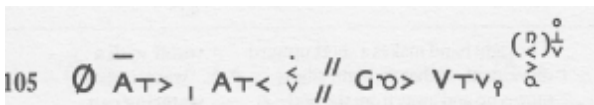


Figure 40. BSL. Brien, page 170

o	η	<	c	>	Q	T	⊥	∨	⊙
---	---	---	---	---	---	---	---	---	---



Figure 41. BSL. Brien, page 172

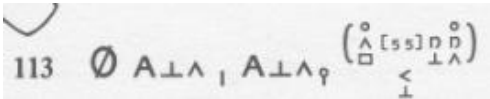
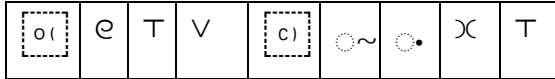
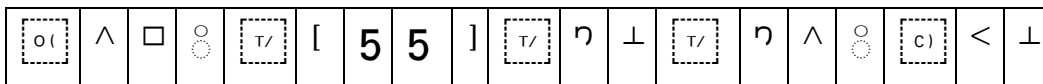


Figure 42. BSL. Brien, page 174



A great deal more work will need to be invested in this proposal to see if this scheme will work in all cases. There are some complicated BSL entries which may not fit the model. This will have to be further investigated.

It is likely that STOKOE CONTROL THEN will also work for the SS and DSE *ori* symbols, however, we have not looked into that yet as both communities have indicated they don't believe they are using Stokoe Notation. This will have to be researched further.

#### 4. Sorting/Collation

We will not address this until other issues (such as unification) have been decided.

#### 5. Confusability

We have attempted to indicate all characters that could be considered similar within the names list. There is no intention to use Stokoe Notation for IDN.

## 6. Appendix A: Charts from Dictionaries

### 1.2 Table of symbols used for writing the signs of the American sign language

#### Tab symbols

1.  $\emptyset$  zero, the neutral place where the hands move, in contrast with all places below
2.  $\bigcirc$  face or whole head
3.  $\wedge$  forehead or brow, upper face
4.  $\sqcup$  mid-face, the eye and nose region
5.  $\cup$  chin, lower face
6.  $\})$  cheek, temple, ear, side-face
7.  $\Pi$  neck
8.  $[\ ]$  trunk, body from shoulders to hips
9.  $\setminus$  upper arm
10.  $\surd$  elbow, forearm
11.  $\mathcal{Q}$  wrist, arm in supinated position (on its back)
12.  $\mathcal{D}$  wrist, arm in pronated position (face down)

Figure A1. ASL. Stokoe 1965, page x

### Dez symbols, some also used as tab

13. A compact hand, fist; may be like 'a', 's', or 't' of manual alphabet
14. B flat hand
15. 5 spread hand; fingers and thumb spread like '5' of manual numeration
16. C curved hand; may be like 'c' or more open
17. E contracted hand; like 'e' or more clawlike
18. F "three-ring" hand; from spread hand, thumb and index finger touch or cross
19. G index hand; like 'g' or sometimes like 'd'; index finger points from fist
20. H index and second finger, side by side, extended
21. I "pinkie" hand; little finger extended from compact hand
22. K like G except that thumb touches middle phalanx of second finger; like 'k' and 'p' of manual alphabet
23. L angle hand; thumb, index finger in right angle, other fingers usually bent into palm
24. 3 "cock" hand; thumb and first two fingers spread, like '3' of manual numeration
25. O tapered hand; fingers curved and squeezed together over thumb; may be like 'o' of manual alphabet
26. R "warding off" hand; second finger crossed over index finger, like 'r' of manual alphabet
27. V "victory" hand; index and second fingers extended and spread apart
28. W three-finger hand; thumb and little finger touch, others extended spread
29. X hook hand; index finger bent in hook from fist, thumb tip may touch fingertip
30. Y "horns" hand; thumb and little finger spread out extended from fist; or index finger and little finger extended, parallel
31. 8 (allocheric variant of Y); second finger bent in from spread hand, thumb may touch fingertip

Figure A2. ASL. Stokoe 1965, page xi



Sig symbols		
32.	^	upward movement
33.	v	downward movement
34.	N	up-and-down movement
		} vertical action
35.	>	rightward movement
36.	<	leftward movement
37.	z	side to side movement
		} sideways action
38.	T	movement toward signer
39.	⊥	movement away from signer
40.	I	to-and-fro movement
		} horizontal action
41.	a	supinating rotation (palm up)
42.	p	pronating rotation (palm down)
43.	w	twisting movement
		} rotary action
44.	o	nodding or bending action
45.	□	opening action (final dez configuration shown in brackets)
46.	#	closing action (final dez configuration shown in brackets)
47.	z	wiggling action of fingers
48.	o	circular action
49.	x	convergent action, approach
50.	x	contactual action, touch
51.	π	linking action, grasp
52.	†	crossing action
53.	o	entering action
54.	÷	divergent action, separate
55.	‘	interchanging action
		} interaction

Figure A3. ASL. Stokoe 1965, page xii

A Table of Symbols for Writing American Sign Language Signs  
 (May be adapted and expanded for signs of other sign languages)  
 from SIGN LANGUAGE STRUCTURE, by William C. Stokoe. 1978. \$3.50.  
 Linstok Press, 9306 Silver Spring, MD, 20901. ISBN 0-932130-03-8.

Manually produced signs of American Sign Language are written, first with a tab symbol to show where the sign action occurs:

- ∅ in front of signer's body
- face or head region
- ∧ forehead or top of head
- ⊥ mid-face, nose, eyes
- ∪ chin, lower face
- } cheek, side of face, ear
- ∥ neck, throat
- [ ] trunk (shoulders to hips)
- ∖ upper arm
- ∕ forearm, elbow
- ⊓ back of hand, wrist
- D inside of wrist

Next with a dez symbol for the handshape, and attitude\*, of what acts:

- A closed hand
- À thumb extended hand
- B flat hand
- ⸀ bent hand
- 5 fully spread hand
- C curved hand
- E retracted hand
- F loop and 3/finger hand
- G index finger hand
- H double finger hand
- I little finger (pinkie) hand
- K 'k' hand of fingerspelling
- L angle hand, thumb & index
- 3 thumb & 1st 2 fingers spread
- M similar to ⸀ or O
- R 2nd finger crosses index
- V 'victory' hand, spread
- W 3 fingers spread, thumb on pinkie
- X index finger bent
- Y 'y' hand of fingerspelling
- B mid-finger in from spread hand

Then with one or more sig symbols to show the sign action:

Motion

- ^ up
- ∨ down
- ∩ up & down
- > rightward
- < leftward
- ↔ side to side
- ⤴ toward signer
- ⤵ away from signer
- ↔ to & fro
- ⊙ in a circle

Internal (hand or finger)

- ∩ bend
- ∩ wiggle
- open
- close

Interaction: hand w/ hand or body

- × approach
- × touch
- ⌘ link or grasp
- † cross
- ⊙ enter
- + separate
- ⊙ interchange
- ~ alternate

\* Subscripts show how dez (D) is held:

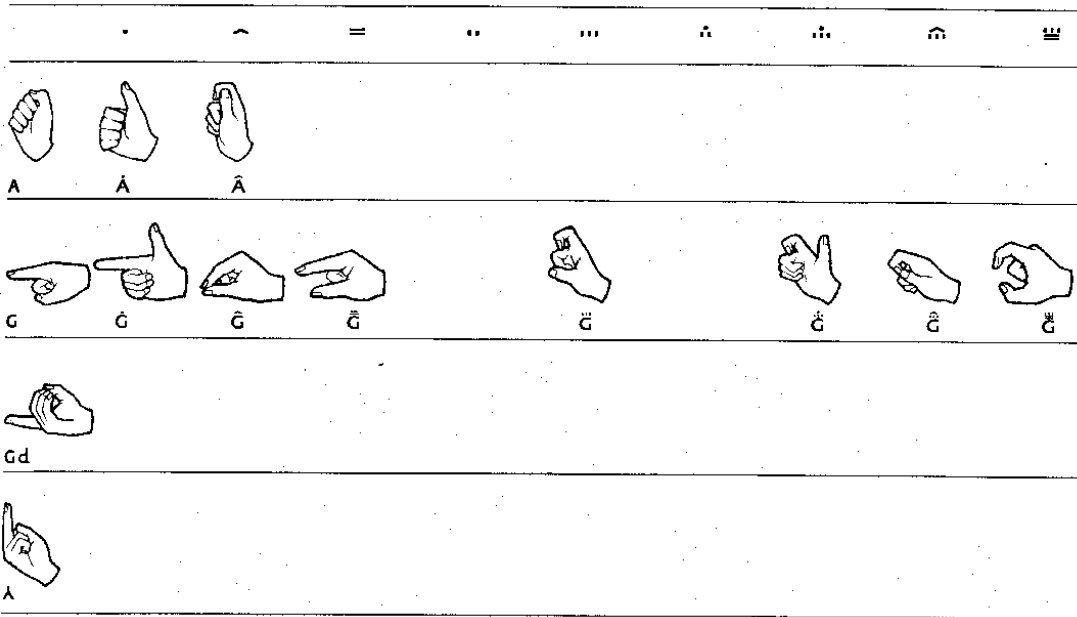
- D<sub>a</sub> supine (palm up or back)
- D<sub>b</sub> pronated (palm down or out)
- ∩D forearm near vertical
- D<sub>∩</sub> salient finger to left

Diacritics show detail of action:

- ^ sharp upward motion
- ×'' repeated touching action

© 1978, Linstok Press, Inc.

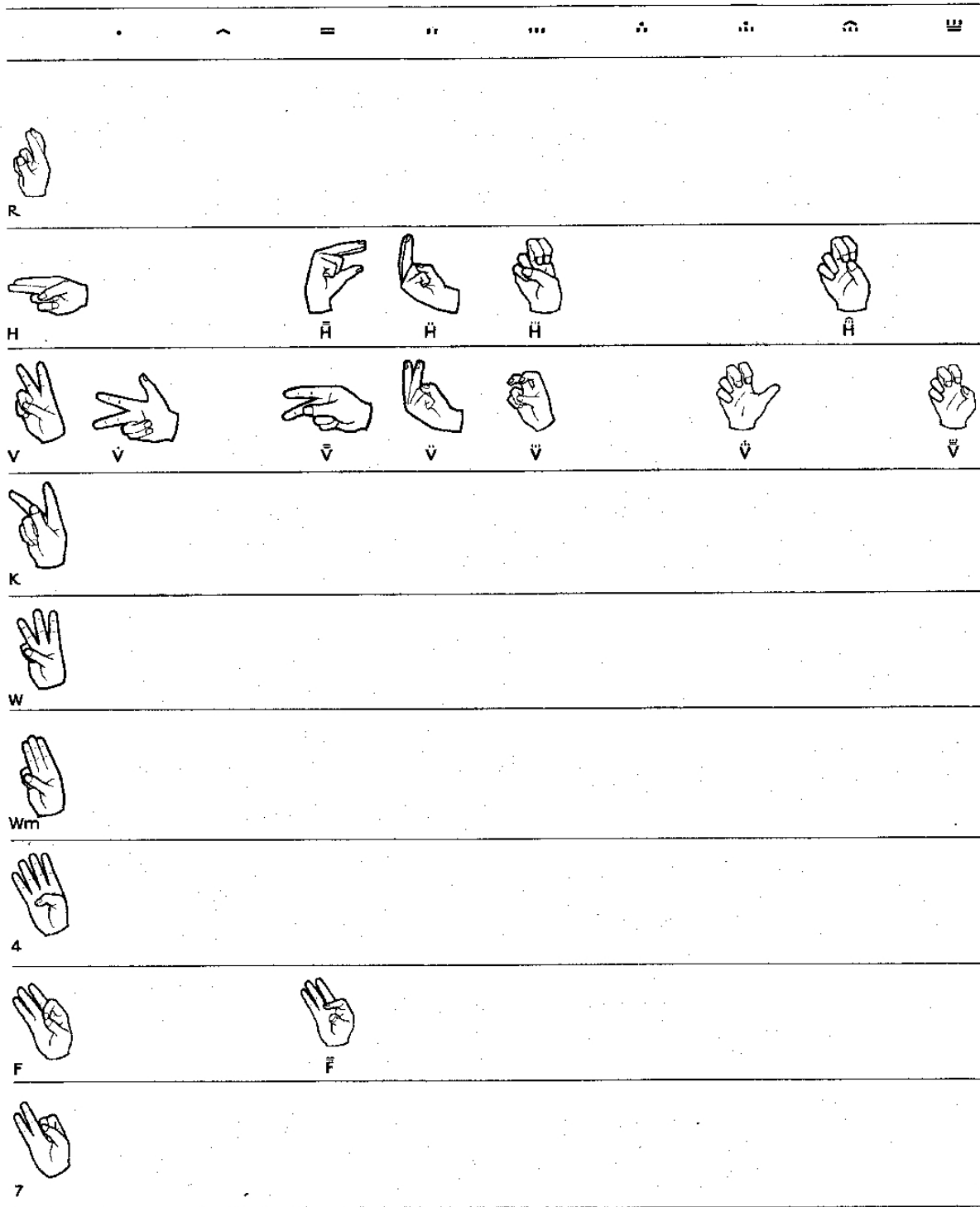
Figure A4 ASL. Stokoe 1979, inside front cover



[xvii]

Figure A5. BSL. Brien 1992, page xvii

How to use the Dictionary  
 [Notation key]



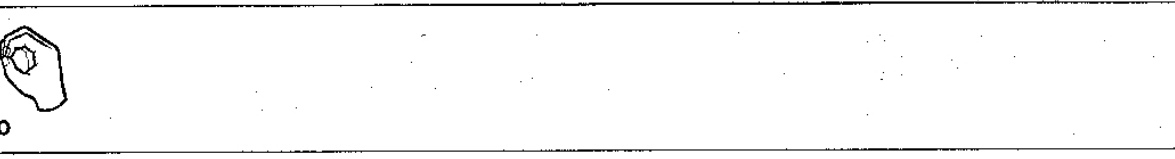
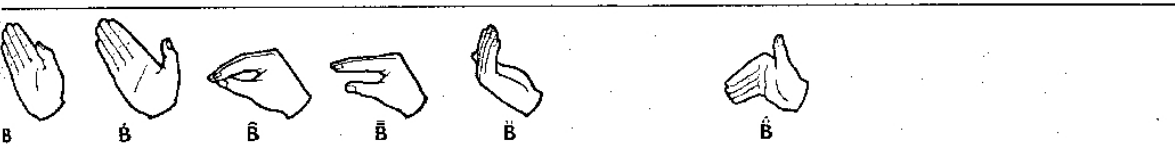
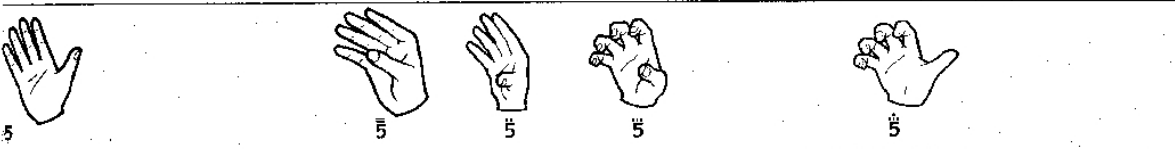
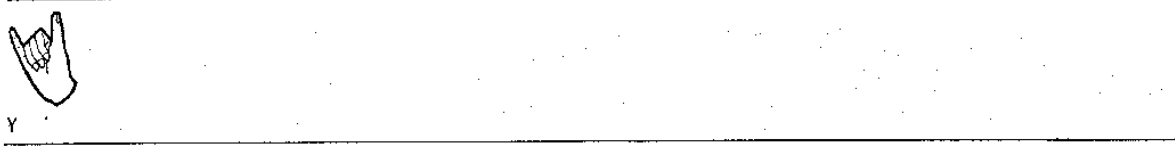
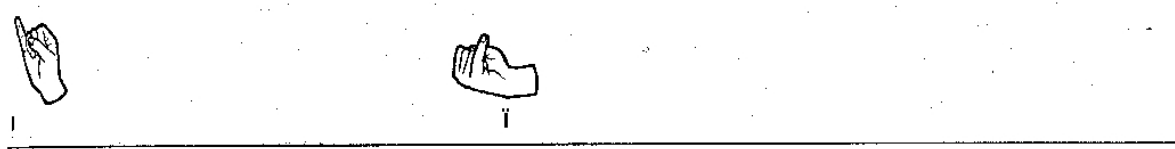
[xviii]

Figure A6 BSL. Brien 1992, page xviii

How to use the Dictionary  
 [Notation key]

No accent

· ^ = .. ... ∴ ∴ ∴ ∴



[xix]

Figure A7. BSL. Brien 1992, page xix

*How to use the Dictionary*  
[Notation key]

The second group of symbols are used to show the *place (tab)* where the sign is made. Again, we have tried to list these symbols in a logical order. The order begins with the 'neutral space' in front of the signer's body, and then moves generally from the top of the head downwards. The list ends with the symbols relating to the arms and legs.

*Location*

∅	neutral space in front of the body	[]	chest	>[	left side of the body
⤴	top of the head	>[]	left side of the chest	]◀	right side of the body
∩	upper face	[]◀	right side of the chest	U	lower trunk
⊙	whole face	[]	front of the shoulders	>U	left side of the lower trunk
U	eye	∩∩	on the shoulders	U◀	right side of the lower trunk
U	nose	∩∩	on the left shoulder	∩	upper arm
∩	check	∩∩	on the right shoulder	/	elbow
∩	ear	∩∩◀	both sides of the upper trunk	/	lower arm
∩	mouth and lips	>∩∩	left of the upper trunk	∩	inside of the wrist
U	lower face or chin	∩∩◀	right of the upper trunk	∩	back of the wrist
∩	under the chin	[	left side of the chest	H	hip
∩	throat or neck	]	right side of the chest	!	upper leg

The next group of symbols (called *ori* symbols) give *orientation* information, telling you about the way the handshape is held. First they tell you about the direction the palm is facing: it may be facing up or down, and so on. Then they tell you in which direction the fingers are pointing. To check this, you must imagine the hand opened flat: the direc-

tion the fingers point now is what is recorded in the notation. Remember that all notations are written from the signer's own point of view, not from the point of view of another person: when the symbol says 'right', for instance, it means 'to the signer's right'.

*Palm orientation*

∩	up	∩	towards the signer	<	left
∩	down	∩	away from the signer	>	right

*Finger orientation*

∩	up	∩	towards the signer	<	left
∩	down	∩	away from the signer	>	right

[xx]

Figure A8. BSL. Brien 1992, page xx

*How to use the Dictionary*  
[Notation key]

This set of symbols tell you about the arrangement of the hands: side by side, one above the other, and so on. These symbols (sometimes called *ha* symbols) do not have one fixed place in the notation as a whole, so you have to look out for them carefully.

*Hand arrangement*

$\bar{A}$	the right hand is held higher than the left hand	$\times$	contacting each other	$\pi$	interlinking
$A$	the left hand is held higher than the right hand	$\uparrow$	nearer the body (the hand notated immediately to the left of this symbol is held nearer to the body than the other hand)	$\odot$	one inside the other
$I$	side by side			$\mp$	crossed over

The next group of symbols tell you what *movement* the hands make. Remember that these symbols (called *sig* symbols) tell you what is happening from the signer's own point of view. Notice that any movement can be repeated: if this happens, the notation has a small dot beside the movement symbols (a small dot *above* the movement symbols means that the movement is sharp).

*Movement*

$\emptyset$	no movement	$\circ$	enter	$\square$	open
$\wedge$	up	$\mp$	cross	$\#$	close
$\vee$	down	$\curvearrowright$	change places	$\circ$	short movement
$\wedge \vee$	up and down	$e$	move in a circle	$\cdot$	sharp movement
$\tau$	towards the signer	$\times$	touch	$\circ\cdot$	short and sharp movement
$\perp$	away from the signer	$\omega$	twist at the wrist	[ ]	handshape after closing or opening
$\mp$	towards and away from the signer	$\alpha$	palm facing up	$\sim$	alternating movements
$<$	left	$\nabla$	palm facing down	$\cdot$	repeated movement (this symbol is always placed beside the symbols(s) indicating the movement to be repeated)
$>$	right	$\cap$	bend at the wrist		
$z$	from side to side	$\cap$	bend at the palm knuckles		
$\div$	away from each other	$\cap$	flex at the knuckles		
$\times$	towards each other	$\omega$	wiggle		
$\pi$	join together	$\pi$	the thumb rubs across the fingers		

Sometimes we need more precisely to make clear which particular part of the hand is involved in a sign (for instance, which finger touches another part of the body). The last set of symbols tell you how we show these parts of the hand.

*Parts of the hand*

$a$	thumb	$1$	between thumb and index finger
$e$	index finger	$2$	between index and middle finger
$i$	middle finger	$3$	between middle and ring finger
$o$	ring finger	$4$	between ring and little finger
$u$	little finger		

Figure A9. BSL. Brien 1992, page xxi





**LUOGO (TAVOLA 2)**

○	Faccia	Π	Collo
∩	Parte superiore e lato del capo	∩	Spalla e tronco superiore
◡	Occhio	[ ]	Petto
Δ	Naso	∩	Tronco inferiore e anca
∩	Guancia	∩	Braccio
∩	Orecchio	∩	Polso
∩	Bocca	∩	Mano non dominante
∩	Mento	∩	Spazio neutro

**MOVIMENTO (TAVOLA 3)**

∅	nessuno o neutro	∩	arco concavo in senso antiorario sul piano orizzontale	x	avvicinamento
∧	verso l'alto	∩	arco convesso in senso orario sul piano verticale	+	divisione
v	verso il basso	∩	arco convesso in senso antiorario sul piano verticale	+	incrocio
N	continuo su e giù	∩	arco concavo in senso orario sul piano verticale	∩	intreccio e afferramento
>	verso destra	∩	arco concavo in senso antiorario sul piano verticale	∩	inserimento
<	verso sinistra	∩	torsione dell'avambraccio e del polso	∩	scambio
Z	continuo a destra e a sinistra	∩	piegamento del polso in avanti		
T	verso il segnante	∩	piegamento del polso all'indietro		
∩	verso l'avanti	∩	piegamento laterale del polso		<i>Aggettivi di movimento</i>
∩	continuo avanti e indietro	∩	piegamento alle nocche	-	ripetuto una volta
∩	arco convesso in senso orario sul piano frontale	∩	piegamento alle giunture intercarpali	"	continuo
∩	arco convesso in senso antiorario sul piano frontale	∩	chiusura della mano e/o delle dita	~	alternato
∩	arco concavo in senso orario sul piano frontale	∩	apertura della mano e/o delle dita	∩	sequenziale delle dita
∩	arco concavo in senso antiorario sul piano frontale	∩	andamento ondulatorio e di tamburellamento	∩	lento
∩	arco convesso in senso orario sul piano orizzontale	∩	sbriciolamento	!	teso
∩	arco convesso in senso antiorario sul piano orizzontale	x	contatto delle mani	∩	estensione del gomito
∩	arco concavo in senso orario sul piano orizzontale	*	contatto delle dita	∩	tenuto

**POSIZIONE DELLA MANO O DELLE MANI (TAVOLA 4)**

<i>Orientamento del palmo e direzione del metacarpo</i>		<i>Posizione nello spazio delle mani in segni a due mani</i>	
∧	verso l'alto	∩	una mano vicina all'altra
v	verso il basso	+	una mano lontana dall'altra
>	verso destra	∩	mano destra sopra quella sinistra
<	verso sinistra	∩	mano sinistra sopra quella destra
T	verso il segnante	∩	mano sinistra davanti alla destra
∩	verso l'avanti	∩	mano destra davanti alla sinistra
		x	contatto delle mani
		*	contatto delle dita
		+	mani incrociate
		∩	mani intrecciate e afferrate
		∩	una mano dentro l'altra
		∩	contatto con gomito dominante
<i>Posizione di una o due mani rispetto al luogo</i>			
x	contatto della mano con una parte del corpo		
+	contatto delle dita con una parte del corpo		





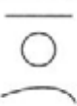





**ERRATA CORRIGE:** Il disegno n. 800.2 è stato invertito con il n. 801.3

Figure A11. LIS. Radutzky 1992, Chart back

## 6. Graphical presentations

The photos are boxed or partitioned if necessary to indicate the number of signs required for each lexical entry. Each box contains one sign. There is artwork such as lines, arrows, and symbols on the images to facilitate the reader's comprehension of the articulation process. The graphical details are largely the effort of Brien (1992):

**Table 1. Graphical representations**

	A single unidirectional movement. The direction of the solid arrowhead indicates the movement direction, which can be upward, downward, leftward or rightward.
	A single unidirectional movement. The direction of the lined arrowhead indicates the movement direction, which can be towards or away from the signer.
	A single bidirectional movement. The directions of the solid arrowheads indicate the movement directions, which can be upward and downward, or leftward and rightward.
	A single bidirectional movement. The directions of the lined arrowheads indicate the movement directions, which can be towards and away from the signer.
	The lines reflect the abstract movement shapes which may be straight, circular or arc.
	A repeated unidirectional movement
	A repeated bidirectional movement
	A movement with a fixed number of repetitions
	A movement ending with a tense hold
	More than one movement type is produced simultaneously.

[5]

Figure A12. HKSL. Tang 2007, page 5. List of graphical presentations 1.

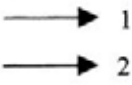


	Movements in sequence
~	Alternating movement
∅	Stationary or motionless hand
⊠	Continuous contact in movement
X	Contact halfway or at the end of movement
☞	Rubbing (Thumb rubs the pad of the selected fingers)
☞	Hooking (Flexion of the non-base joints)
☞	Flattening (Flexion of the base joints)
⤿	Wiggling (Selected fingers flex and extend at the base joints)
㇏	Nodding (Flexion of the wrist joint)
ω	Twisting (Rotation of the forearm)
⌘	Tremoring (Selected finger(s) waver(s) and contact(s) the place of articulation)
e	Radial/Ulnar flexion of the wrist joint
	Release (Selected fingers open, subject to the direction of the arrowhead)
	Close (Selected fingers close, subject to the direction of the arrowhead)

Figure A13. HKSL. Tang 2007, page 5. List of graphical presentations 1.

**Table 1. Handshapes and symbols**


























































 S								
 O								
 A	 $\dot{A}$				 $\hat{A}$			 $\hat{A}^x$
 I	 i		 $\bar{I}$	 $\dot{\bar{I}}$				 $I^f$
 ʌ								
 ɜ					 ɜ	 $\bar{\varepsilon}$	 $\dot{\bar{\varepsilon}}$	
 I			 $\bar{I}$					
 U	 $\dot{U}$				 $\hat{U}$			 $U_x$
 R								
			 $\bar{G}$		 $\hat{G}$	 $\bar{G}$	 $\dot{\bar{G}}$	
 V	 $\dot{V}$	 $\bar{V}$	 $\dot{\bar{V}}$					 $\dot{V}^x$
 K								
 Y								
 ʔ	 $\dot{ʔ}$				 $\hat{ʔ}$			
 W			 $\bar{W}$					 $W_{NS}$
 $W_{TP}$								
 3								 $W_c$
 F					 $\hat{F}$			 $F_o$
 4								
 B	 $\dot{B}$	 $\bar{B}$			 $\hat{B}$	 $\bar{\hat{B}}$		 $\dot{\bar{B}}$
 C	 $\dot{C}$							
 E								
 5			 $\bar{5}$	 $\dot{\bar{5}}$		 $\hat{5}$		

Figure A14. HKSL. Tang 2007, page 24. List of handshapes.

artikulationsställe		artikulator		artikulation
<b>LÄGE</b>		<b>HANDFORM</b>		<b>RÖRELSERIKTNING</b>
ansiktet	○	flata handen	J	vänster ←
övre ansiktet	∩	S-handen	S	höger →
nedre ansiktet	∪	spretade handen	Y	vänster-höger ↔
hjässan	⤿	klohanden	Σ	fram ↑
pannan	∩	vinklade handen	Λ	in ↓
örat	}	slutna handen	A	fram-in ↕
kinden	)	O-handen	O	upp ^
näsan	°	knutna handen	G	ner v
munnen	⊖	pekfingret	L	upp-ner ∨
hakan	∪	N-handen	N	
halsen	□	V-handen	V	<b>RÖRELSEART</b>
vänster axel	┌	krokfingret	f	slås ω
höger axel	┐	dubbelkroken	∩	vrides ~
bröstet	[]	tummen	B	spelar ∩
vänster sida	[	lillfingret	I	båge ∩
höger sida	]	flyghanden	F	cirkel ○
armen	<	M-handen	M	förändring ⇒
magen	└	T-handen	T	
		tupphanden	V	<b>INTERAKTIONSPORT</b>
		mätthanden	∩	växelvis ≈
		nyphanden	Δ	konvergerande >
		stora nyphanden	H	divergerande <
				hakning α
				mottagning e
				kors x
				vinkel ∟
				kontakt •
				upprepad kontakt *
		<b>ATTITYDRIKTNING</b>		
		vänster ←		
		höger →		
		fram ↑		
		in ↓		
		upp ^		
		ner v		
		<b>ATTITYDVRIDNING</b>		
		vänster )		
		höger (		
		fram ∩		
		in ∪		
		upp ⊕		
		ner ⊖		
<b>ÖVRIGA SYMBOLER</b>				
upprepad rörelse :				
signemgräns /				
upprepat signem /				

Figure A15. SS. Bergman 1977, page 89. List of shapes.

# HANFORMSORDNING

Namn	Symbol
flata handen	J
flata tumhanden	Ƶ
sprethanden	ƶ
vinkelhanden	∧
tumvinkelhanden	∧
A-handen	A
S-handen	S
klohanden	Σ
O-handen	O
knutna handen	G
E-handen	E
tummen	B
pekfingret	L
L-handen	J
raka mätthanden	4
nyphanden	Δ
T-handen	T
krokfingret	1
mätthanden	3
hållhanden	Θ
långfingret	R
N-handen	N
lilla O-handen	Δ
V-handen	V
tupphanden	ƶ
K-handen	K
dubbelkroken	Ω
böjda tupphanden	ƶ
M-handen	M
W-handen	W
lillfingret	I

Figure A16. SS. Sveriges 1998, page xix. List of handshapes.

Namn	Symbol
flyghanden	±
stora långfingret	Ƴ
runda långfingret	Z
stora nyphanden	H
X-handen	X

#### Attitydsymboler

attitydriktning		attitydvridning
←	vänster	›
→	höger	‹
↑	fram	∩
↓	in	∧
^	upp	⊥
∨	ner	⊥

Figure A17. SS. Sveriges 1998, page xx. List of handshapes (cont) and list of attitude symbols

# LÄGESORDNING

Läge	Symbol
hjässan	⌒
ansiktet, i huvudhöjd	○
övre delen av ansiktet	∩
nedre delen av ansiktet	∪
pannan	⌒
ögonen	∞
ögat	◦
näsan	△
sidorna av huvudet, öronen	{ }
sidan av huvudet, örat, höger	}
sidan av huvudet, örat, vänster	{
kinderna	( )
kinden, höger	)
kinden, vänster	(
munnen	⊙
hakan	∪
nacken	∩
halsen	∥
axlarna	┌ ┐
axeln, höger	┐
axeln, vänster	┌
armen	<
överarmen	⋈
underarmen	⋈
bröstet	[ ]
höger sida av bröstet	]
vänster sida av bröstet	[
magen, mellangärdet	└┘
höfterna	└┘
höft, höger	┘
höft, vänster	└

Figure A18. SS. Sveriges 1998, page xxi. List of location symbols



Läge	Symbol
benet	⌞
neutrala stället framför kroppen	ingen symbol
passiva handen som ett ställe	symbol för handform + attityd

Figure A19. SS. Sveriges 1998, page xxii. List of location symbols (cont)

## ÖVRIGA TRANSKRIPTIONSSYMBOLER

### Rörelsesymboler

kontakt	•
hålls stilla	°
rörelseriktning, vänster, höger, vänster - höger	← → ↔
rörelseriktning, fram, in, fram - in	↑ ↓ †
rörelseriktning, upp, ner, upp - ner	^ v ~
rörelseriktning med distinkt rörelseslut, vänster, höger	↔ ↗
rörelseriktning med distinkt rörelseslut, fram, in	† ‡
rörelseriktning med distinkt rörelseslut, upp, ner	~ x
divergerar	∨
konvergerar	<
kors	x
hakning	⌘
byte	“ ”
entré	⊞
vinkel	∠
båge	∪
cirkel	○
slås (handens riktning förändras)	↻
vrids (handflatans riktning förändras)	↺
spelar	≈
strör	↘
vinkar	#
förändras	⇒
växelvis	≈

Figure A20. SS. Sveriges 1998, page xxiii. List of movement symbols

### Relationssymboler

Symbolerna visar var den aktiva handens placering i förhållande till ett kroppsläge eller den andra handen

över	⌞
under	⌟
bredvid	⌞
framför	⌞
bakom	⌟

### Övriga symboler

upprepad artikulation	ː
sekventiell artikulation	
sammansättning av två eller flera led	/

Se Kompendium i teckentranskription (B. Bergman och T. Björkstrand), 1993 Inst. för lingvistik, Stockholms Universitet.

Figure A21. SS. Sveriges 1998, page xxiv. List of relational combining marks and other symbols

# PILAR OCH ANDRA RÖRELSESYMBOLER

Rörelse	Symbol
upprepad kontakt	⌘
rörelse i pilens riktning	→
rörelse med distinkt rörelseslut	→
upprepad rörelse i pilens riktning	⇒
rörelse fram och tillbaka, i sidled eller upp och ner	↔
växelvisa rörelser	↔↔
bågrörelse i pilens riktning	↷
etappvis förflyttning	⋈
förflyttning med små vågrörelser eller sidledsrörelser	⋈
förflyttning med vridrörelser	↷→
förflyttning i sick-sack	⋈
förflyttning med upprepad handformsändring	⋈
förflyttning med cirkelrörelser	⋈
cirkelrörelse	↻
växelvisa cirkelrörelser	↻↻
handen vrids eller slås	↷
handen vrids eller slås, upprepad rörelse	↷
spelande växelvisa fingerrörelser	⋈
vinkande (samtidiga) fingerrörelser	↷
tummen förs utmed fingrarna	⋈

Figure A22. SS. Sveriges 1998, page xxv. List of graphical symbols

BIJLAGE 1 OVERZICHT VAN NOTATIE-SYMBOLEN

In deze bijlage wordt een overzicht van de verschillende soorten notatie-symbolen gegeven. Het is een samenvatting van de hoofdstukken uit deel II: bij de Palm- en Vingeroriëntatie onder andere zullen slechts enkele voorbeelden gegeven worden om het systematisch gebruik aan te duiden van de pijlen.

Plaats

∅	neutrale ruimte	[ ]	voor de romp
∩	voor het hoofd	┌ ┐	voor het bovenste deel van de romp
∪	bij de kruin	└ ┘	voor het onderste deel van de romp
∩	voor het bovenste deel van het hoofd	∩	bij de bovenarm
∪	bij het oor	∪	bij de elleboog
∩	bij de ogen	∩	op de pols van de linkerhand
∪	bij de neus	∪	bij de heupen
∩	voor het onderste deel van het hoofd	∩	bij het bovenbeen
∪	bij de wang	∪	bij het onderbeen
∩	bij de mond	∩	rechts voor het voorhoofd
∪	onder de kin	┌ ┐	boven de rechter schouder
∩	bij de hals		

Handvorm

A	A-hand	bC	baby-C-hand
S	S-hand	bC <sub>2</sub>	baby-C-twee-hand
AS	AS-hand	bC <sub>2spr</sub>	baby-C-2-spreid-hand
∩	geld-hand	O	O-hand
E	E-hand	bO	baby-O-hand
E1	E-één-hand	bO <sub>2</sub>	baby-O-twee-hand
C	C-hand	To	T-nul-hand
∅	C-nul-hand	∩	dichte-snavel-hand
C1	C-één-hand	b∩	baby-dichte-snavel-hand
C <sub>spr</sub>	C-spreid-hand		

Figure A23. DSE. KOMVA. 1988, page 89. List of Location and Handshapes

$b \nabla_2$	baby-dichte-snavel-twee-hand	$\ddot{V}$	V-klauw-hand
$\nabla$	open-snavel-hand	I	I-hand
$\nabla_{spr}$	open-snavel-spreid-hand	L	L-hand
$b \nabla$	baby-open-snavel-hand	$\lrcorner$	hoortjes-hand
$b \nabla_2$	baby-open-snavel-2-hand	Y	Y-hand
T	T-hand	5	5-hand
openT	open-T-hand	$\ddot{5}$	5-klauw-hand
Q	Q-hand	$\ddot{5}$	5-klauw-nul-hand
$Q_2$	Q-twee-hand	$5_r$	5-hand met gebogen ringvinger
$Q_5$	Q-vijf-hand	$5_{rx}$	5-hand met contact van ringvinger en duim
$\lrcorner$	douche-hand	5m	5-hand met gebogen middelvinger
$\lrcorner_2$	douche-twee-hand	$5_{mx}$	5-hand met contact van middelvinger en duim
$\uparrow$	bloem-hand	W	W-hand
B	B-hand	$\ddot{W}$	W-klauw-hand
B1	B-één-hand	D	D-hand
$\circ_B$	B-nul-hand	F	F-hand
$\emptyset B$	ontspannen-B-hand	K	K-hand
$\lrcorner$	hoek-hand	M	M-hand
$\circ \lrcorner$	hoek-nul-hand	N	N-hand
1	één-hand	P	P-hand
$X_1$	X-één-hand	R	R-hand
$X_2$	X-twee-hand	3	3-hand
$\circ X_2$	X-twee-nul-hand	4	4-hand
$1_v$	één-v-hand		
U	U-hand		
$\ddot{U}$	U-klauw-hand		
$\circ U$	U-nul-hand		
V	V-hand		

Figure A24. DSE. KOMVA. 1988. page 90. List of Handshapes (cont.)

**Palmoriëntatie**

- ↓ palm naar beneden
- ↑ palm naar boven
- ← palm naar links
- ↙ palm tussen naar links en naar beneden
- ↓  
⊖ palm naar het lichaam toe
- ↖  
⊖ palm schuin van het lichaam af en naar links
- )↙ palm tussen naar beneden en naar het lichaam toe

**Vingeroriëntatie**

- ↓ vingers naar beneden
- ↑ vingers naar boven
- ← vingers naar links
- ↙ vingers tussen naar links en naar beneden
- ↓  
⊖ vingers naar het lichaam toe
- ↖ vingers schuin van het lichaam af en naar links
- )↙ vingers tussen naar beneden en naar het lichaam toe

**Bewegingspijlen**

- éénmaal naar rechts
- ⇨ tweemaal naar rechts
- ⇨⇨ drie of meer maal naar rechts
- ⇠⇨ herhaalde beweging heen en weer
- ↗  
⊖ schuin naar voren en naar rechts
- )↘ schuin naar beneden en van het lichaam af

- ↪ van links naar rechts in een boog
- ⦶ herhaalde cirkel naar rechts
- ⦶  
⊖ herhaalde cirkel naar voren en naar rechts, in het horizontale vlak
- ⦶  
⊖ zigzag naar voren
- ⦶  
⊖ golf naar voren
- ⦶ grote cirkel
- ⦶ kleine cirkel

Figure A25. DSE. KOMVA. 1988, page 91. List of Palm and Finger Orientations and Movement Arrows

Bewegingssymbolen

o	klopbeweging vanuit de pols	m	snelle, wiebelende beweging van wijs- en middelvinger
o	klopbeweging vanuit de knokkels	o	duim wrijft over de top(pen) van vingers
o	klopbeweging vanuit de vinger-gewrichten	o	de hand opent zich
o	snelle, wiebelende beweging van de vingers	#	de hand sluit zich
o	nagel van duim wrijft krachtig langs vinger, eindigt gestrekt	S	alternerend, snel om de beurt
x	hand maakt contact met hand of lichaam	#...	de hand sluit zich meerdere keren
o	draaiende beweging vanuit onderarm	x...	meerdere keren contact

Combinaties van bewegingen

o	naar beneden, terwijl de hand contact maakt	o	naar lichaam toe, tot contact
o	klopbeweging vanuit de pols, terwijl de hand opent	x, o, x	contact, naar beneden, contact

Manier van beweging

g	groot	f	krachtig
k	klein	t	gespannen
s	snel	h	hold, plotseling stoppend, waarna de hand even op dezelfde plaats blijft
l	langzaam		

Figure A26. DSE. KOMVA. 1988. page 92. List of Motion Symbols, Combinations of movements and Manner of Motion

Handen ten opzichte van elkaar, bij tweehandige gebaren

1	linkerhand lager dan rechterhand	1 <sup>≠</sup> 1	handen zijn gekruist
1	rechterhand lager dan linkerhand	1 <sup>X</sup> 1	handen maken contact
1	dichtbij elkaar	5 <sup>X</sup> 5	handen grijpen in elkaar
1	linkerhand dicht-ter bij het lichaam	⊙ C B	linkerhand omvat rechterhand
1	rechterhand dicht-ter bij het lichaam	B ⊙ C	rechterhand omvat linkerhand

Delen van de hand:

1	wijsvinger
2	middelvinger
3	ringvinger
4	pink
5	duim
6	hand (rug of palm)
7	pols
8	onderste deel van de arm

Delen van de vinger:

a	topje van de vinger
b	bovenste kootje
c	topgewricht
d	middelste kootje
e	middelste gewricht
f	onderste kootje
g	onderste gewricht

Figure A27. DSE. KOMVA. 1988. page 93. List of Two-handed signs and Parts of the Hands and Fingers



←	vingers naar links
↑	vingers van het lichaam af
↓	vingers naar het lichaam toe
↗	vingers schuin naar boven en naar het lichaam toe
↖	vingers schuin naar boven en van het lichaam af
	etcetera

Figure A28. DSE. KOMVA. 1988. More Orientation Symbols

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	E40	E41	E42	E43	E44	E45	E46	E47	E48	E49	E4A	E4B	E4C	E4D	E4E	E4F
0	A E400	J E410	V E420	Ø E430	∩ E440	o E450	t E460	P E470	1 E480	o E490	∅ E4A0	]	⌒ E4C0	⌒ E4D0	∧ E4E0	^ E4F0
1	B E401	M E411	∧ E421	1 E431	∧ E441	p E451	v E461	S E471	2 E481	u E491	∩ E4A1	⌒ E4B1	° E4C1	∨ E4D1	∨ E4E1	∨ E4F1
2	C E402	N E412	A E422				x E462	T E472	3 E482	↳ E492	∩ E4A2	⌒ E4B2	∞ E4C2	! E4D2		
3	C E403	O E413	W E423	3 E433	b E443		1 E463	X E473	4 E483	⊗ E493	∩ E4A3	⌒ E4B3	△ E4C3	⊙ E4D3		
4	D E404	∩ E414	X E424	4 E434		s E454	2 E464		5 E484	↔ E494	∩ E4A4	⌒ E4B4	{ E4C4	⊙ E4D4	T E4E4	↓ E4F4
5	E E405	∅ E415	Y E425	5 E435	d E445		5 E465		6 E485	L E495	∩ E4A5	L E4B5	{ E4C5	ND E4D5	⊥ E4E5	↑ E4F5
6	F E406	∩ E416	Y E426		e E446		h E466		7 E486	- E496	∩ E4A6	∩ E4B6	}	∩ E4D6	< E4E6	← E4F6
7	G E407	P E417	Y E427	7 E437			k E467		8 E487	∩ E497	3 E4A7	∩ E4B7	( E4C7	∩ E4D7	> E4E7	→ E4F7
8	H E408	Q E418	∧ E428	8 E438			l E468		a E488	∩ E498	∩ E4A8	∩ E4B8	( E4C8	∩ E4D8	Q E4E8	∩ E4F8
9	I E409	R E419	Z E429				s E469		b E489	∩ E499	∩ E4A9	∩ E4B9	) E4C9		∩ E4E9	∩ E4F9
A	I E40A	S E41A	Y E42A	8 E43A			t E46A		c E48A	∩ E49A	U E4AA	Q E4BA	∩ E4CA		∧ E4EA	
B	J E40B	T E41B	∆ E42B	# E43B			F E46B		d E48B	∩ E49B	∩ E4AB	∩ E4BB	∩ E4CB		∩ E4EB	
C	J E40C	U E41C	∆ E42C	∩ E43C		m E45C	X E46C		e E48C	+ E49C	∩ E4AC	∩ E4BC	∩ E4CC	< E4DC	T E4EC	∩ E4FC
D	∩ E40D	∩ E41D	∑ E42D	∩ E43D		p E45D	C E46D		f E48D		∩ E4AD		< E4CD	> E4DD	⊥ E4ED	∩ E4FD
E	K E40E	∩ E41E	3 5 E42E	∩ E43E		r E45E	N E46E		g E48E		[ E4AE		∩ E4CE	< E4DE	< E4EE	∩ E4FE
F	L E40F	V E41F	g E42F	∩ E43F	n E44F	s E45F	O E46F		i E48F		[ E4AF		∩ E4CF	> E4DF	> E4EF	∩ E4FF

	E50	E51	E52	E53	E54	E55	E56	E57	E58	E59	E5A	E5B	E5C	E5D	E5E	E5F
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

**Handshape (dez) symbols**

E400	<b>A</b>	STOKOE HANDSHAPE-CAPITAL A • fist → 0041 A latin capital letter a
E401	<b>B</b>	STOKOE HANDSHAPE-CAPITAL B • flat hand → 0042 B latin capital letter b
E402	<b>C</b>	STOKOE HANDSHAPE-CAPITAL C • curved hand → 0043 C latin capital letter c
E403	<b>Ĉ</b>	STOKOE HANDSHAPE-CAPITAL C WITH LEFT TAIL • LIS: ???
E404	<b>D</b>	STOKOE HANDSHAPE-CAPITAL D • DSE, LIS → 0044 D latin capital letter d
E405	<b>E</b>	STOKOE HANDSHAPE-CAPITAL E • claw hand → 0045 E latin capital letter e
E406	<b>F</b>	STOKOE HANDSHAPE-CAPITAL F • F-hand → 0046 F latin capital letter f
E407	<b>G</b>	STOKOE HANDSHAPE-CAPITAL G • index → 0047 G latin capital letter g
E408	<b>H</b>	STOKOE HANDSHAPE-CAPITAL H • H-hand → 0048 H latin capital letter h
E409	<b>I</b>	STOKOE HANDSHAPE-CAPITAL I → 0049 I latin capital letter i
E40A	<b>Ī</b>	STOKOE HANDSHAPE-CAPITAL I BAR • SS: air hand → 0197 Ī latin capital letter i with stroke
E40B	<b>J</b>	STOKOE HANDSHAPE-CAPITAL J • SS: flat hand → 004A J latin capital letter j
E40C	<b>Ĵ</b>	STOKOE HANDSHAPE-CAPITAL J BAR • SS: ??? → 0248 Ĵ latin capital letter j with stroke
E40D	<b>Ĵ</b>	STOKOE HANDSHAPE-CAPITAL TURNED J • SS: hook finger
E40E	<b>K</b>	STOKOE HANDSHAPE-CAPITAL K • K-hand → 004B K latin capital letter k
E40F	<b>L</b>	STOKOE HANDSHAPE-CAPITAL L • L-hand → 004C L latin capital letter l
E410	<b>Ĵ</b>	STOKOE HANDSHAPE-CAPITAL INVERTED L • SS: L-hand
E411	<b>M</b>	STOKOE HANDSHAPE-CAPITAL M • M-hand → 004D M latin capital letter m
E412	<b>N</b>	STOKOE HANDSHAPE-CAPITAL N • N-hand → 004E N latin capital letter n
E413	<b>O</b>	STOKOE HANDSHAPE-CAPITAL O • O-hand → 004F O latin capital letter o
E414	<b>⊔</b>	STOKOE HANDSHAPE-CAPITAL OPEN O • SS: measure of hand → 0186 ⊔ latin capital letter open o
E415	<b>⊖</b>	STOKOE HANDSHAPE-CAPITAL O BAR • SS: hold hand → 019F ⊖ latin capital letter o with middle tilde

E416	<b>⊔</b>	STOKOE HANDSHAPE-CAPITAL FLAT OPEN O • SS: straight matt hand???
E417	<b>P</b>	STOKOE HANDSHAPE-CAPITAL P • DSE: P-hand → 0050 P latin capital letter p
E418	<b>Q</b>	STOKOE HANDSHAPE-CAPITAL Q • DSE: Q-hand → 0051 Q latin capital letter q
E419	<b>R</b>	STOKOE HANDSHAPE-CAPITAL R • R-hand → 0052 R latin capital letter r
E41A	<b>S</b>	STOKOE HANDSHAPE-CAPITAL S • S-hand → 0053 S latin capital letter s
E41B	<b>T</b>	STOKOE HANDSHAPE-CAPITAL T • T-hand → 0054 T latin capital letter t
E41C	<b>U</b>	STOKOE HANDSHAPE-CAPITAL U • DSE: U-hand → 0055 U latin capital letter u
E41D	<b>⊔</b>	STOKOE HANDSHAPE-CAPITAL TURNED U • SS: double hook
E41E	<b>⊔</b>	STOKOE HANDSHAPE-CAPITAL TURNED U BAR • SS: bent rooster hand
E41F	<b>V</b>	STOKOE HANDSHAPE-CAPITAL V • V-hand → 0056 V latin capital letter v
E420	<b>⊔</b>	STOKOE HANDSHAPE-CAPITAL V BAR • SS: rooster hand
E421	<b>⊔</b>	STOKOE HANDSHAPE-CAPITAL TURNED V • SS: angled hand → 0245 ⊔ latin capital letter turned v
E422	<b>⊔</b>	STOKOE HANDSHAPE-CAPITAL TURNED V BAR • SS
E423	<b>W</b>	STOKOE HANDSHAPE-CAPITAL W • W-hand → 0057 W latin capital letter w
E424	<b>X</b>	STOKOE HANDSHAPE-CAPITAL X • X-hand → 0058 X latin capital letter x
E425	<b>Y</b>	STOKOE HANDSHAPE-CAPITAL Y → 0059 Y latin capital letter y
E426	<b>¥</b>	STOKOE HANDSHAPE-CAPITAL Y BAR • SS: splayed hand → 00A5 ¥ yen sign
E427	<b>¥</b>	STOKOE HANDSHAPE-CAPITAL Y BAR WITH VERTICAL STROKE • SS: big middle finger
E428	<b>⊔</b>	STOKOE HANDSHAPE-CAPITAL TURNED Y • middle finger extended from fist
E429	<b>Z</b>	STOKOE HANDSHAPE-CAPITAL Z • SS: round the middle finger → 005A Z latin capital letter z
E42A	<b>⊔</b>	STOKOE HANDSHAPE-CAPITAL HORNS • horns hand → 2442 ⊔ ocr fork
E42B	<b>Δ</b>	STOKOE HANDSHAPE-CAPITAL DELTA • SS: hands pinched → 039A Δ greek capital letter delta
E42C	<b>Δ</b>	STOKOE HANDSHAPE-CAPITAL DELTA WITH VERTICAL STROKE • SS: small O-hand

E42D	Σ	STOKOE HANDSHAPE-CAPITAL SIGMA • SS: claw hand → 03A3 Σ greek capital letter sigma
E42E	𐄂	STOKOE HANDSHAPE-THREE FIVE • LIS: ???
E42F	g	STOKOE HANDSHAPE-LARGE SMALL G • LIS: index down → 0067 g latin small letter g
E430	0	STOKOE HANDSHAPE-ZERO • DSE → 0030 0 digit zero
E431	1	STOKOE HANDSHAPE-ONE → 0031 1 digit one
E432	☐	<reserved>
E433	3	STOKOE HANDSHAPE-THREE • cock hand → 0033 3 digit three
E434	4	STOKOE HANDSHAPE-FOUR → 0034 4 digit four
E435	5	STOKOE HANDSHAPE-FIVE • 5-hand → 0035 5 digit five
E436	☐	<reserved>
E437	7	STOKOE HANDSHAPE-SEVEN → 0037 7 digit seven
E438	8	STOKOE HANDSHAPE-EIGHT • BSL-Kyle, Stokoe 1978 ☐ → 0038 8 digit eight
E439	☐	<reserved>
E43A	8	STOKOE HANDSHAPE-OPEN EIGHT → 0222 8 latin capital letter ou
E43B	#	STOKOE HANDSHAPE-NUMBER SIGN • Stokoe 1960 <sub>a</sub> -only → 0023 # number sign
E43C	h	STOKOE HANDSHAPE-GELD • DSE: geld hand
E43D	∇	STOKOE HANDSHAPE-BEAK • DSE
E43E	∇	STOKOE HANDSHAPE-OPEN BEAK • DSE
E43F	∟	STOKOE HANDSHAPE-ANGLE • DSE
E440	∩	STOKOE HANDSHAPE-SHOWER • DSE: shower?
E441	∧	STOKOE HANDSHAPE-FLOWER • DSE: flower?

### Modifiers to Handshape (dez) symbols

E443	b	STOKOE HANDSHAPE-SMALL B • DSE: baby → 0062 b latin small letter b
E444	☐	<reserved>
E445	d	STOKOE HANDSHAPE-SMALL D • BSL → 0064 d latin small letter d
E446	e	STOKOE HANDSHAPE-SMALL E • DSE → 0065 e latin small letter e
E447	☐	<reserved>
E448	☐	<reserved>
E449	☐	<reserved>
E44A	☐	<reserved>
E44B	☐	<reserved>
E44C	☐	<reserved>
E44D	☐	<reserved>

E44E	☐	<reserved>
E44F	n	STOKOE HANDSHAPE-SMALL N • DSE → 006E n latin small letter n
E450	o	STOKOE HANDSHAPE-SMALL O • DSE → 006F o latin small letter o
E451	p	STOKOE HANDSHAPE-SMALL P • DSE → 0070 p latin small letter p
E452	☐	<reserved>
E453	☐	<reserved>
E454	s	STOKOE HANDSHAPE-SMALL S • LIS → 0073 s latin small letter s
E455	☐	<reserved>
E456	☐	<reserved>
E457	☐	<reserved>
E458	☐	<reserved>
E459	☐	<reserved>
E45A	☐	<reserved>
E45B	☐	<reserved>
E45C	m	STOKOE HANDSHAPE-SUBSCRIPT SMALL M • DSE → 2098 m latin subscript small letter m
E45D	p	STOKOE HANDSHAPE-SUBSCRIPT SMALL P • DSE → 209A p latin subscript small letter p
E45E	r	STOKOE HANDSHAPE-SUBSCRIPT SMALL R • DSE
E45F	s	STOKOE HANDSHAPE-SUBSCRIPT SMALL S • DSE → 209B s latin subscript small letter s
E460	t	STOKOE HANDSHAPE-SUBSCRIPT SMALL T • Stokoe 1960 <sub>a</sub> , 1965 <sub>n</sub> → 209C t latin subscript small letter t
E461	v	STOKOE HANDSHAPE-SUBSCRIPT SMALL V • DSE
E462	x	STOKOE HANDSHAPE-SUBSCRIPT SMALL X • DSE → 2093 x latin subscript small letter x
E463	1	STOKOE HANDSHAPE-SUBSCRIPT ONE • DSE: one-hand → 2081 1 subscript one
E464	2	STOKOE HANDSHAPE-SUBSCRIPT TWO • DSE: two-hand → 2082 2 subscript two
E465	5	STOKOE HANDSHAPE-SUBSCRIPT FIVE • DSE → 2085 5 subscript five
E466	h	STOKOE HANDSHAPE-SUPERSCRIPIT SMALL H • DSE: sudden stop → 02B0 h modifier letter small h
E467	k	STOKOE HANDSHAPE-SUPERSCRIPIT SMALL K • DSE: small movement → 1D4F k modifier letter small k
E468	l	STOKOE HANDSHAPE-SUPERSCRIPIT SMALL L • DSE: slow movement → 02E1 l modifier letter small l
E469	s	STOKOE HANDSHAPE-SUPERSCRIPIT SMALL S • DSE: quick movement → 02E2 s modifier letter small s

E46A <sup>t</sup> STOKOE HANDSHAPE-SUPERSCRIPT SMALL T  
 • DSE: tense movement  
 → 1D57 <sup>t</sup> modifier letter small t

### HKSL Handshape (modifier?) symbols

E46B <sup>F</sup> STOKOE HANDSHAPE-SUPERSCRIPT CAPITAL F  
 E46C <sup>X</sup> STOKOE HANDSHAPE-SUPERSCRIPT CAPITAL X  
 E46D <sup>C</sup> STOKOE HANDSHAPE-SMALL CAPITAL C  
 → 1D04 <sup>c</sup> latin letter small capital c  
 E46E <sup>N</sup> STOKOE HANDSHAPE-SMALL CAPITAL N  
 → 0274 <sup>N</sup> latin letter small capital n  
 E46F <sup>O</sup> STOKOE HANDSHAPE-SMALL CAPITAL O  
 → 1D0F <sup>o</sup> latin letter small capital o  
 E470 <sup>P</sup> STOKOE HANDSHAPE-SMALL CAPITAL P  
 → 1D18 <sup>p</sup> latin letter small capital p  
 E471 <sup>S</sup> STOKOE HANDSHAPE-SMALL CAPITAL S  
 → A731 <sup>s</sup> latin letter small capital s  
 E472 <sup>T</sup> STOKOE HANDSHAPE-SMALL CAPITAL T  
 → 1D1B <sup>T</sup> latin letter small capital t  
 E473 <sup>X</sup> STOKOE HANDSHAPE-SMALL CAPITAL X

### Parts of hand symbols

E480 <sup>1</sup> STOKOE PART OF HAND-SUPERSCRIPT ONE  
 • DSE and Stokoe 1960 <sub>a</sub> do not superscript, BSL:  
 between thumb and index finger  
 → 00B9 <sup>1</sup> superscript one  
 E481 <sup>2</sup> STOKOE PART OF HAND-SUPERSCRIPT TWO  
 • DSE and Stokoe 1960 <sub>a</sub> do not superscript, \*  
 BSL: between index and middle finger  
 → 00B2 <sup>2</sup> superscript two  
 E482 <sup>3</sup> STOKOE PART OF HAND-SUPERSCRIPT THREE  
 • DSE and Stokoe 1960 <sub>a</sub> do not superscript, \*  
 BSL: between middle and ring finger  
 → 00B3 <sup>3</sup> superscript three  
 E483 <sup>4</sup> STOKOE PART OF HAND-SUPERSCRIPT FOUR  
 • BSL: between ring and little finger, \* DSE does  
 not superscript  
 → 2074 <sup>4</sup> superscript four  
 E484 <sup>5</sup> STOKOE PART OF HAND-SUPERSCRIPT FIVE  
 • DSE does not superscript  
 → 2075 <sup>5</sup> superscript five  
 E485 <sup>6</sup> STOKOE PART OF HAND-SUPERSCRIPT SIX  
 • DSE does not superscript  
 → 2076 <sup>6</sup> superscript six  
 E486 <sup>7</sup> STOKOE PART OF HAND-SUPERSCRIPT SEVEN  
 • DSE does not superscript  
 → 2077 <sup>7</sup> superscript seven  
 E487 <sup>8</sup> STOKOE PART OF HAND-SUPERSCRIPT EIGHT  
 • DSE does not superscript  
 → 2078 <sup>8</sup> superscript eight  
 E488 <sup>a</sup> STOKOE PART OF HAND-SUPERSCRIPT SMALL A  
 • DSE: tip of finger, BSL: thumb  
 → 1D43 <sup>a</sup> modifier letter small a  
 E489 <sup>b</sup> STOKOE PART OF HAND-SUPERSCRIPT SMALL B  
 • DSE: upper phalanx  
 → 1D47 <sup>b</sup> modifier letter small b  
 E48A <sup>c</sup> STOKOE PART OF HAND-SUPERSCRIPT SMALL C  
 • DSE: top of joint  
 E48B <sup>d</sup> STOKOE PART OF HAND-SUPERSCRIPT SMALL D  
 • DSE: middle phalanx  
 → 1D48 <sup>d</sup> modifier letter small d  
 E48C <sup>e</sup> STOKOE PART OF HAND-SUPERSCRIPT SMALL E  
 • BSL: index finger, DSE: middle of joint  
 → 1D49 <sup>e</sup> modifier letter small e

E48D <sup>f</sup> STOKOE PART OF HAND-SUPERSCRIPT SMALL F  
 • DSE: lower phalanx, powerful movement  
 → 1DA0 <sup>f</sup> modifier letter small f

E48E <sup>g</sup> STOKOE PART OF HAND-SUPERSCRIPT SMALL G  
 • DSE: lower joint

E48F <sup>i</sup> STOKOE PART OF HAND-SUPERSCRIPT SMALL I  
 • BSL: middle finger  
 → 2071 <sup>i</sup> superscript latin small letter i

E490 <sup>o</sup> STOKOE PART OF HAND-SUPERSCRIPT SMALL O  
 • BSL: ring finger  
 → 1D52 <sup>o</sup> modifier letter small o

E491 <sup>u</sup> STOKOE PART OF HAND-SUPERSCRIPT SMALL U  
 • BSL: little finger  
 → 1D58 <sup>u</sup> modifier letter small u

### Parts of hand symbols (BSL-Kyle)

E492 <sup>↳</sup> STOKOE PART OF HAND-BETWEEN RING LITTLE  
 FINGER  
 E493 <sup>≡</sup> STOKOE PART OF HAND-TIPS OF FINGERS  
 E494 <sup>↔</sup> STOKOE PART OF HAND-LENGTHS OF FINGERS  
 E495 <sup>└</sup> STOKOE PART OF HAND-THUMB EDGE  
 • thumb edge (from base of thumb to tip of index  
 finger)  
 E496 <sup>-</sup> STOKOE PART OF HAND-LITTLE FINGER EDGE  
 E497 <sup>┌</sup> STOKOE PART OF HAND-PALM SURFACE  
 → 02FD <sup>┌</sup> modifier letter shelf  
 E498 <sup>▭</sup> STOKOE PART OF HAND-BACK OF HAND SURFACE  
 E499 <sup>└</sup> STOKOE PART OF HAND-PALM SIDE OF WRIST  
 E49A <sup>└</sup> STOKOE PART OF HAND-BACK OF HAND SIDE OF  
 WRIST  
 E49B <sup>≡</sup> STOKOE PART OF HAND-INNER SIDE OF ELBOW  
 E49C <sup>+</sup> STOKOE PART OF HAND-OUTER SIDE OF ELBOW

### Location (tab) symbols

E4A0 <sup>∅</sup> STOKOE LOCATION-NEUTRAL SPACE-1  
 → 00D8 <sup>∅</sup> latin capital letter o with stroke  
 E4A1 <sup>⌒</sup> STOKOE LOCATION-TOP OF HEAD-1  
 E4A2 <sup>⌒</sup> STOKOE LOCATION-FOREHEAD  
 E4A3 <sup>∩</sup> STOKOE LOCATION-UPPER FACE  
 • BSL-Kyle: forehead  
 → 2229 <sup>∩</sup> intersection  
 E4A4 <sup>⊙</sup> STOKOE LOCATION-WHOLE FACE  
 E4A5 <sup>⊏</sup> STOKOE LOCATION-EYES-1  
 • BSL: eye  
 → 237D <sup>└┐</sup> shouldered open bo x  
 E4A6 <sup>Δ</sup> STOKOE LOCATION-NOSE-1  
 E4A7 <sup>3</sup> STOKOE LOCATION-CHEEK  
 E4A8 <sup>∩</sup> STOKOE LOCATION-EAR  
 E4A9 <sup>∪</sup> STOKOE LOCATION-MOUTH-1  
 • BSL: mouth and lips, BSL-Kyle: lips  
 E4AA <sup>U</sup> STOKOE LOCATION-LOWER FACE  
 → 222A <sup>U</sup> union  
 E4AB <sup>∪</sup> STOKOE LOCATION-CHIN  
 E4AC <sup>∪</sup> STOKOE LOCATION-UNDER CHIN  
 E4AD <sup>Π</sup> STOKOE LOCATION-NECK-1  
 • BSL: throat or neck  
 → 03A0 <sup>Π</sup> greek capital letter pi  
 E4AE <sup>[ ]</sup> STOKOE LOCATION-CHEST  
 • BSL-Kyle: area between shoulders and hips  
 E4AF <sup>[</sup> STOKOE LOCATION-LEFT SIDE OF CHEST  
 → 005B <sup>[</sup> left square bracket  
 E4B0 <sup>]</sup> STOKOE LOCATION-RIGHT SIDE OF CHEST  
 → 005D <sup>]</sup> right square bracket  
 E4B1 <sup>⌒</sup> STOKOE LOCATION-UPPER TORSO  
 • BSL uses long vertical stroke



E4B2	┌	STOKOE LOCATION-LEFT UPPER TORSO	• BSL uses long vertical stroke
E4B3	┐	STOKOE LOCATION-RIGHT UPPER TORSO	• BSL uses long vertical stroke
E4B4	└	STOKOE LOCATION-LOWER TORSO	• BSL uses long vertical stroke
E4B5	┘	STOKOE LOCATION-LEFT LOWER TORSO	• BSL uses long vertical stroke
E4B6	┘	STOKOE LOCATION-RIGHT LOWER TORSO	• BSL uses long vertical stroke
E4B7	↖	STOKOE LOCATION-UPPER ARM-1	• BSL-Kyle: shoulder and upper arm
E4B8	↙	STOKOE LOCATION-ELBOW-1	
E4B9	↘	STOKOE LOCATION-FOREARM-1	• BSL: lower arm → 2713 ✓ check mark
E4BA	○	STOKOE LOCATION-SUPINE ARM	• BSL: inside of the wrist
E4BB	○	STOKOE LOCATION-PRONE ARM	• BSL: back of the wrist, LIS: wrist
E4BC	⋈	STOKOE LOCATION-HIPS	

### Signed Swedish Location (tab) symbols

E4C0	ˆ	STOKOE LOCATION-TOP OF HEAD-2	
E4C1	°	STOKOE LOCATION-EYE	→ 00B0 ° degree sign
E4C2	∞	STOKOE LOCATION-EYES-2	
E4C3	△	STOKOE LOCATION-NOSE-2	
E4C4	{ }	STOKOE LOCATION-SIDES OF HEAD WITH EARS	
E4C5	{	STOKOE LOCATION-RIGHT SIDE OF HEAD WITH EAR	→ 007B { left curly bracket
E4C6	}	STOKOE LOCATION-LEFT SIDE OF HEAD WITH EAR	→ 007D } right curly bracket
E4C7	( )	STOKOE LOCATION-CHEEKS	
E4C8	(	STOKOE LOCATION-LEFT CHEEK	→ 0028 ( left parenthesis
E4C9	)	STOKOE LOCATION-RIGHT CHEEK	→ 0029 ) right parenthesis
E4CA	⊂	STOKOE LOCATION-MOUTH-2	
E4CB	⊃	STOKOE LOCATION-NECK-2	
E4CC	∥	STOKOE LOCATION-THROAT	
E4CD	<	STOKOE LOCATION-ARM	→ 003C < less-than sign
E4CE	↙	STOKOE LOCATION-UPPER ARM-2	
E4CF	↘	STOKOE LOCATION-FOREARM-2	
E4D0	└	STOKOE LOCATION-ABDOMEN	→ 02FD └ modifier letter shelf

### Other Location (tab) symbols

E4D1	↖	STOKOE LOCATION-UPPER ARM-3	• LIS
E4D2	!	STOKOE LOCATION-UPPER LEG	• BSL
E4D3	⊥	STOKOE LOCATION-THIGH	• DSE → 2AF0 ⊥ vertical line with circle below
E4D4	⊥	STOKOE LOCATION-LOWER LEG	• DSE → 2AEF ⊥ vertical line with circle above
E4D5	ND	STOKOE LOCATION-NON DOMINANT HAND	• LIS: non dominant hand
E4D6	⊃	STOKOE LOCATION-BROW	• BSL-Kyle
E4D7	∥	STOKOE LOCATION-LEGS	• BSL-Kyle

E4D8	⊃	STOKOE LOCATION-BACK	• BSL-Kyle
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### BSL Modifier Location (tab) symbols

E4DC	<	STOKOE MODIFIER LETTER HIGH LEFT ARROWHEAD
E4DD	>	STOKOE MODIFIER LETTER HIGH RIGHT ARROWHEAD

### BSL-Kyle Modifier Location (tab) symbols

E4DE	<	STOKOE MODIFIER LETTER LOW LEFT ARROWHEAD	→ 02F1 , modifier letter low left arrowhead
E4DF	>	STOKOE MODIFIER LETTER LOW RIGHT ARROWHEAD	→ 02F2 , modifier letter low right arrowhead

### BSL Orientation (ori) symbols

E4E0	^	STOKOE ORIENTATION-FINGERS UP-1	→ 02C4 ^ modifier letter up arrowhead
E4E1	v	STOKOE ORIENTATION-FINGERS DOWN-1	→ 02C5 v modifier letter down arrowhead
E4E2	▨	<reserved>	
E4E3	▩	<reserved>	
E4E4	⊥	STOKOE ORIENTATION-FINGERS TOWARD-1	→ 22A4 ⊥ down tack
E4E5	⊥	STOKOE ORIENTATION-FINGERS AWAY-1	→ 22A5 ⊥ up tack
E4E6	<	STOKOE ORIENTATION-FINGERS LEFT-1	→ 02C2 < modifier letter left arrowhead
E4E7	>	STOKOE ORIENTATION-FINGERS RIGHT-1	→ 02C3 > modifier letter right arrowhead
E4E8	○	STOKOE ORIENTATION-PALM UP-1A	
E4E9	○	STOKOE ORIENTATION-PALM DOWN-1A	
E4EA	^	STOKOE ORIENTATION-PALM UP-1B	• LIS
E4EB	v	STOKOE ORIENTATION-PALM DOWN-1B	• LIS
E4EC	⊥	STOKOE ORIENTATION-PALM TOWARD-1	→ 22A4 ⊥ down tack
E4ED	⊥	STOKOE ORIENTATION-PALM AWAY-1	→ 22A5 ⊥ up tack
E4EE	<	STOKOE ORIENTATION-PALM LEFT-1	→ 02C2 < modifier letter left arrowhead
E4EF	>	STOKOE ORIENTATION-PALM RIGHT-1	→ 02C3 > modifier letter right arrowhead

### SS Orientation (ori) symbols

E4F0	^	STOKOE ORIENTATION-FINGERS UP-2	→ 02C6 ^ modifier letter circumflex accent
E4F1	v	STOKOE ORIENTATION-FINGERS DOWN-2	→ 02C7 v caron
E4F2	▨	<reserved>	
E4F3	▩	<reserved>	
E4F4	⊥	STOKOE ORIENTATION-FINGERS TOWARD-2	
E4F5	↑	STOKOE ORIENTATION-FINGERS AWAY-2	
E4F6	←	STOKOE ORIENTATION-FINGERS LEFT-2	
E4F7	→	STOKOE ORIENTATION-FINGERS RIGHT-2	
E4F8	⊥	STOKOE ORIENTATION-PALM UP-2	→ 02D4 ⊥ modifier letter up tack
E4F9	⊥	STOKOE ORIENTATION-PALM DOWN-2	→ 02D5 ⊥ modifier letter up tack
E4FA	▨	<reserved>	
E4FB	▩	<reserved>	
E4FC	⊥	STOKOE ORIENTATION-PALM TOWARD-2	
E4FD	⊥	STOKOE ORIENTATION-PALM AWAY-2	
E4FE	⊃	STOKOE ORIENTATION-PALM LEFT-2	→ 02D2 ⊃ modifier letter centred right half ring

E4FF c STOKOE ORIENTATION-PALM RIGHT-2  
→ 02D3 c modifier letter centred left half ring

### DSE Orientation (ori) symbols

E500 ↯ STOKOE ORIENTATION-FINGERS UP-3  
E501 ↰ STOKOE ORIENTATION-FINGERS DOWN-3  
E502 ↷ STOKOE ORIENTATION-FINGERS LEFT AND UP  
E503 ↶ STOKOE ORIENTATION-FINGERS RIGHT AND UP  
E504 ↸ STOKOE ORIENTATION-FINGERS LEFT AND DOWN  
E505 ↷ STOKOE ORIENTATION-FINGERS RIGHT AND DOWN  
E506 ↰ STOKOE ORIENTATION-FINGERS LEFT-3  
E507 ↶ STOKOE ORIENTATION-FINGERS RIGHT-3  
E508 ↯ STOKOE ORIENTATION-PALM UP-3  
E509 ↰ STOKOE ORIENTATION-PALM DOWN-3  
E50A ↷ STOKOE ORIENTATION-PALM LEFT AND UP  
E50B ↶ STOKOE ORIENTATION-PALM RIGHT AND UP  
E50C ↸ STOKOE ORIENTATION-PALM LEFT AND DOWN  
E50D ↷ STOKOE ORIENTATION-PALM RIGHT AND DOWN  
E50E ↰ STOKOE ORIENTATION-PALM LEFT-3  
E50F ↶ STOKOE ORIENTATION-PALM RIGHT-3

### DSE Orientation and Movement modifiers

E510 ⇌ STOKOE MODIFIER-HORIZONTAL RELATION TO SIGNER  
E511 ) STOKOE MODIFIER-VERTICAL RELATION TO SIGNER

### Hand arrangement (ha) symbols (both hands)

E520 | STOKOE HAND ARRANGEMENT-SIDE BY SIDE  
• DSE uses superscript  
E521 + STOKOE HAND ARRANGEMENT-APART  
• LIS: one hand away from the other  
E522 × STOKOE HAND ARRANGEMENT-HAND CONTACT  
• DSE uses superscript  
E523 ○ STOKOE HAND ARRANGEMENT-LEFT HAND IN FRONT OF RIGHT  
• LIS  
E524 ◊ STOKOE HAND ARRANGEMENT-RIGHT HAND IN FRONT OF LEFT  
• BSL: nearer the body, DSE uses superscript  
→ 26B2 ◊ neuter  
E525 \* STOKOE HAND ARRANGEMENT-FINGER CONTACT  
• LIS  
E526 x STOKOE HAND ARRANGEMENT-INTERLINKING  
• DSE and Stokoe 1965 n use superscript  
E527 ⊙ STOKOE HAND ARRANGEMENT-INSERTION  
• DSE uses superscript  
E528 † STOKOE HAND ARRANGEMENT-CROSSED OVER  
• DSE and Stokoe 1965 n use superscript  
E529 ‡ STOKOE HAND ARRANGEMENT-CLOSED  
• hand or finger closed  
E52A ⌘ STOKOE HAND ARRANGEMENT-RIGHT HAND OVER LEFT  
• LIS  
E52B ⌘ STOKOE HAND ARRANGEMENT-LEFT HAND OVER RIGHT  
• LIS  
E52C d STOKOE HAND ARRANGEMENT-SMALL LETTER D  
• LIS: dominate  
E52D g STOKOE HAND ARRANGEMENT-SMALL LETTER G  
• LIS: elbow

### LIS Position of one or two hands (compared to place)

E52E × STOKOE HAND ARRANGEMENT-HAND CONTACT WITH BODY PART

E52F \* STOKOE HAND ARRANGEMENT-FINGER CONTACT WITH BODY PART

### Movement (sig) symbols

E530 ∅ STOKOE MOVEMENT-MOTIONLESS  
E531 ^ STOKOE MOVEMENT-UP  
→ 02C4 ^ modifier letter up arrowhead  
E532 v STOKOE MOVEMENT-DOWN  
→ 02C5 v modifier letter down arrowhead  
E533 ^ STOKOE MOVEMENT-UP AND DOWN  
E534 T STOKOE MOVEMENT-TOWARD-1  
E535 ⊥ STOKOE MOVEMENT-AWAY-1  
E536 ⊥ STOKOE MOVEMENT-TOWARD AND AWAY-1  
E537 < STOKOE MOVEMENT-LEFT-1  
→ 02C2 < modifier letter left arrowhead  
E538 > STOKOE MOVEMENT-RIGHT-1  
→ 02C3 > modifier letter right arrowhead  
E539 z STOKOE MOVEMENT-SIDE TO SIDE-1  
E53A ÷ STOKOE MOVEMENT-SEPARATE  
• BSL: away from each other  
→ 00F7 ÷ division sign  
E53B x STOKOE MOVEMENT-APPROACH  
• BSL: towards each other  
E53C x STOKOE MOVEMENT-LINK  
• BSL: join together, BSL-Kyle: interlock  
E53D ⊙ STOKOE MOVEMENT-INSERTION-1  
• BSL: enter  
→ 2299 ⊙ circled dot operator  
E53E ⊙ STOKOE MOVEMENT-INSERTION-2  
• Stokoe 1960 a  
E53F ⊙ STOKOE MOVEMENT-INSERTION-3  
• Stokoe 1960 a  
E540 † STOKOE MOVEMENT-CROSS  
• BSL uses a variant  
E541 ∘ STOKOE MOVEMENT-INTERCHANGE  
• BSL: change places  
E542 e STOKOE MOVEMENT-RIGHT OPEN COUNTER CLOCKWISE SPIRAL  
E543 o STOKOE MOVEMENT-BOTTOM OPEN COUNTER CLOCKWISE SPIRAL  
E544 o STOKOE MOVEMENT-BOTTOM OPEN CLOCKWISE SPIRAL  
E545 u STOKOE MOVEMENT-TOP OPEN COUNTER CLOCKWISE SPIRAL  
• LIS: concave arc in a clockwise direction in the frontal plane  
E546 u STOKOE MOVEMENT-TOP OPEN CLOCKWISE SPIRAL  
• LIS: concave arc in a counterclockwise direction in the frontal plane  
E547 × STOKOE MOVEMENT-CONTACT-1  
• BSL-Kyle: touch, LIS: hand contact  
→ 02DF × modifier letter cross accent  
E548 ω STOKOE MOVEMENT-TWIST  
• BSL: twist at wrist  
→ 03C9 ω greek small letter omega  
E549 α STOKOE MOVEMENT-SUPINATIVE  
→ 0251 α latin small letter alpha  
E54A ϐ STOKOE MOVEMENT-PRONATIVE  
→ 0252 ϐ latin small letter turned alpha  
E54B η STOKOE MOVEMENT-WRIST FLEXION  
→ 014B η latin small letter eng  
E54C u STOKOE MOVEMENT-WRIST EXTENSION  
E54D u STOKOE MOVEMENT-WRIST BENT  
• LIS: lateral bending of the wrist  
E54E b STOKOE MOVEMENT-WRIST FLEXION AND EXTENSION  
• BSL-Kyle

E54F	𐄀	STOKOE MOVEMENT-BEND AT PALM KNUCKLES • HKSL: flattening (flexion of the base joints)
E550	𐄁	STOKOE MOVEMENT-FLEX AT KNUCKLES • HKSL: hooking (flexion of the non-base joints)
E551	𐄂	STOKOE MOVEMENT-WIGGLE • BSL-Kyle: flicker → 1D25 𐄂 latin letter ain
E552	𐄃	STOKOE MOVEMENT-CRUMBLING-1
E553	𐄄	STOKOE MOVEMENT-CRUMBLING-2 • BSL: thumb rubs across the fingers
E554	𐄅	STOKOE MOVEMENT-CRUMBLING-3 • HKSL: rubbing
E555	𐄆	STOKOE MOVEMENT-OPEN → 2610 𐄆 ballot bo x
E556	𐄇	STOKOE MOVEMENT-CLOSE → 0023 # number sign
E557	𐄈	STOKOE MOVEMENT-REVERSE → 1D19 𐄈 latin letter small capital reversed r
E558	𐄉	STOKOE MOVEMENT-GRAZE DOWN • Stokoe 1960 𐄉
E559	𐄊	STOKOE MOVEMENT-CONTINUOUS CONTACT • HKSL
E55A	𐄋	STOKOE MOVEMENT-TREMORING • HKSL → 028D 𐄋 latin small letter turned w

### LIS Movement (sig) symbols

E55B	𐄌	STOKOE MOVEMENT-BEND KNUCKLES → 2310 𐄌 reversed not sign
E55C	𐄍	STOKOE MOVEMENT-BEND INTERCARPAL JOINTS
E55D	*	STOKOE MOVEMENT-FINGER CONTACT

### LIS adjectives of Movement (sig) symbols

E55E	𐄎	STOKOE MOVEMENT-SEQUENTIAL FINGER
E55F	𐄏	STOKOE MOVEMENT-SLOW
E560	𐄐	STOKOE MOVEMENT-TENSE
E561	𐄑	STOKOE MOVEMENT-ELBOW EXTENSION
E562	𐄒	STOKOE MOVEMENT-HELD

### SS Movement (sig) symbols

E563	•	STOKOE MOVEMENT-CONTACT-2 → 00B7 • middle dot
E564	←	STOKOE MOVEMENT-LEFT-2 • left movement direction
E565	→	STOKOE MOVEMENT-RIGHT-2 • right movement direction
E566	↔	STOKOE MOVEMENT-SIDE TO SIDE-2 • left-right movement direction
E567	↔	STOKOE MOVEMENT-SIDE TO SIDE-3 • not sure if this is significant difference
E568	↗	STOKOE MOVEMENT-INTO
E569	↑	STOKOE MOVEMENT-TOWARD-2 • direction of movement, front
E56A	↓	STOKOE MOVEMENT-AWAY-2 • direction of movement, towards
E56B	↕	STOKOE MOVEMENT-TOWARD AND AWAY-2 • from and towards movement direction
E56C	𐄓	STOKOE MOVEMENT-LEFT WITH DISTINCT STOP • direction of movement with a distinctive end movement, left
E56D	𐄔	STOKOE MOVEMENT-RIGHT WITH DISTINCT STOP • direction of movement with a distinctive end movement, right

E56E	𐄕	STOKOE MOVEMENT-TOWARD WITH DISTINCT STOP • direction of movement with a distinctive movement end from
E56F	𐄖	STOKOE MOVEMENT-AWAY WITH DISTINCT STOP • direction of movement with a distinctive movement end towards
E570	𐄗	STOKOE MOVEMENT-UP WITH DISTINCT STOP • direction of movement with a distinctive movement end up
E571	𐄘	STOKOE MOVEMENT-DOWN WITH DISTINCT STOP • direction of movement with a distinctive movement end down
E572	𐄙	STOKOE MOVEMENT-DIVERGE
E573	𐄚	STOKOE MOVEMENT-CONVERGE
E574	𐄛	STOKOE MOVEMENT-ENTER
E575	𐄜	STOKOE MOVEMENT-ANGLE
E576	𐄝	STOKOE MOVEMENT-ARC
E577	𐄞	STOKOE MOVEMENT-CIRCLE → 26AA 𐄞 medium white circle
E578	𐄟	STOKOE MOVEMENT-ROTATION → 007E ~ tilde
E579	𐄠	STOKOE MOVEMENT-PLAY
E57A	𐄡	STOKOE MOVEMENT-CHANGE
E57B	𐄢	STOKOE MOVEMENT-ALTERNATE-2

### DSE Movement (sig) symbols

E580	→	STOKOE MOVEMENT-ONCE RIGHT → 21F8 → rightwards arrow with vertical stroke
E581	←	STOKOE MOVEMENT-ONCE LEFT → 21F7 ← leftwards arrow with vertical stroke
E582	↑	STOKOE MOVEMENT-ONCE UP
E583	↓	STOKOE MOVEMENT-ONCE DOWN
E584	↙	STOKOE MOVEMENT-ONCE LEFT AND DOWN
E585	↘	STOKOE MOVEMENT-ONCE RIGHT AND DOWN
E586	↖	STOKOE MOVEMENT-ONCE LEFT AND UP
E587	↗	STOKOE MOVEMENT-ONCE RIGHT AND UP
E588	⇒	STOKOE MOVEMENT-TWICE RIGHT → 21FB ⇒ rightwards arrow with double vertical stroke
E589	⇐	STOKOE MOVEMENT-TWICE LEFT → 21FA ⇐ leftwards arrow with double vertical stroke
E58A	⇑	STOKOE MOVEMENT-TWICE UP → 21DE ⇑ upwards arrow with double stroke
E58B	⇓	STOKOE MOVEMENT-TWICE DOWN → 21DF ⇓ downwards arrow with double stroke
E58C	↙↘	STOKOE MOVEMENT-TWICE LEFT AND DOWN
E58D	↘↙	STOKOE MOVEMENT-TWICE RIGHT AND DOWN
E58E	↖↗	STOKOE MOVEMENT-TWICE LEFT AND UP
E58F	↗↖	STOKOE MOVEMENT-TWICE RIGHT AND UP
E590	⇒⇒	STOKOE MOVEMENT-THREE PLUS RIGHT
E591	⇐⇐	STOKOE MOVEMENT-THREE PLUS LEFT
E592	⇑⇑	STOKOE MOVEMENT-THREE PLUS UP
E593	⇓⇓	STOKOE MOVEMENT-THREE PLUS DOWN
E594	↙⇑	STOKOE MOVEMENT-THREE PLUS LEFT AND DOWN
E595	↘⇑	STOKOE MOVEMENT-THREE PLUS RIGHT AND DOWN
E596	↖⇑	STOKOE MOVEMENT-THREE PLUS LEFT AND UP
E597	↗⇑	STOKOE MOVEMENT-THREE PLUS RIGHT AND UP
E598	⇐⇐⇐	STOKOE MOVEMENT-REPEATED BACK AND FORTH
E599	⇑⇑⇑	STOKOE MOVEMENT-REPEATED UP AND DOWN
E59A	⇑⇑⇑	STOKOE MOVEMENT-REPEATED-1
E59B	⇑⇑⇑	STOKOE MOVEMENT-REPEATED-2
E59C	𐄣	STOKOE MOVEMENT-ZIGZAG
E59D	𐄤	STOKOE MOVEMENT-WAVE
E59E	𐄥	STOKOE MOVEMENT-LEFT TO RIGHT IN ARC
E59F	𐄦	STOKOE MOVEMENT-RIGHT TO LEFT IN ARC
E5A0	𐄧	STOKOE MOVEMENT-DOWN TO UP IN ARC

- E5A1 ↘ STOKOE MOVEMENT-UP TO DOWN IN ARC  
• not sure if this is used
- E5A2 ~ STOKOE MOVEMENT-FAST WOBBLY FINGERS
- E5A3 ↘ STOKOE MOVEMENT-THUMBNAIL RUBS FINGERS
- E5A4 ~ STOKOE MOVEMENT-FAST WOBBLY INDEX AND MIDDLE FINGERS  
→ 2A4B m intersection beside and joined with intersection
- E5A5 ▯ STOKOE MOVEMENT-THUMB RUBS FINGERS

### Modifier Movement (sig) symbols

- E5A6 ○ STOKOE MODIFIER MOVEMENT-SHORT  
• above sig
- E5A7 ◦ STOKOE MODIFIER MOVEMENT-SHARP  
• above sig  
→ 0307 ◦ combining dot above
- E5A8 ◌ STOKOE MODIFIER MOVEMENT-SHORT AND SHARP  
• above sig
- E5A9 ~ STOKOE MODIFIER MOVEMENT-ALTERNATE  
• to the right of sig  
→ 007E ~ tilde
- E5AA ◌ STOKOE MODIFIER MOVEMENT-REPEATED  
• to the right of sig, 2x is continuous  
→ 00B7 · middle dot
- E5AB ◌ STOKOE MODIFIER MOVEMENT-REPEATED ARTICULATION  
• SS: repeated articulation, BSL-Kyle: rapid

### Handshape in Movement symbols

- E5AC ⊥ STOKOE MODIFIER MOVEMENT-LEFT SQUARE BRACKET
- E5AD ⊥ STOKOE MODIFIER MOVEMENT-RIGHT SQUARE BRACKET

### Combining marks

- E5B0 ○ STOKOE COMBINING ONE DOT ABOVE  
→ 0307 ◦ combining dot above
- E5B1 ○ STOKOE COMBINING TWO DOTS ABOVE  
→ 0308 ◌ combining diaeresis
- E5B2 ○ STOKOE COMBINING THREE DOTS ABOVE  
→ 20DB ◌ combining three dots above
- E5B3 ○ STOKOE COMBINING CIRCUMFLEX ABOVE  
→ 0302 ◌ combining circumflex accent
- E5B4 ○ STOKOE COMBINING CARON ABOVE  
→ 030C ◌ combining caron
- E5B5 ○ STOKOE COMBINING RIGHT ARROWHEAD ABOVE  
• LIS: closing  
→ 0350 ◌ combining right arrowhead above
- E5B6 ○ STOKOE COMBINING LEFT ARROWHEAD ABOVE  
→ 1DFE ◌ combining left arrowhead above
- E5B7 ○ STOKOE COMBINING INVERTED BREVE ABOVE  
• LIS: curved  
→ 0311 ◌ combining inverted breve
- E5B8 ○ STOKOE COMBINING MACRON ABOVE  
→ 0304 ◌ combining macron
- E5B9 ≡ STOKOE COMBINING EQUALS SIGN ABOVE
- E5BA ○ STOKOE COMBINING CRUMBLING ABOVE  
• LIS: crumbling
- E5BB ⊥ STOKOE COMBINING RIGHT HALF RECTANGLE ABOVE  
• LIS: rectangular
- E5BC ⊥ STOKOE COMBINING UP TACK ABOVE  
• SS: front
- E5BD ⊥ STOKOE COMBINING UP TACK WITH LEFT DOT ABOVE  
• HKSL

- E5BE ⊥ STOKOE COMBINING DOWN TACK ABOVE  
• SS: behind
- E5BF ⊥ STOKOE COMBINING WIDE BRIDGE ABOVE  
• SS: during  
→ 20E9 ⊥ combining wide bridge above
- E5C0 ⊥ STOKOE COMBINING INVERTED WIDE BRIDGE ABOVE  
• SS: over
- E5C1 ⊥ STOKOE COMBINING DOUBLE VERTICAL LINE ABOVE  
• SS: next
- E5C2 ⊥ STOKOE COMBINING RING ABOVE  
• LIS: round  
→ 030A ⊥ combining ring above
- E5C3 ⊥ STOKOE COMBINING NUMBER SIGN ABOVE  
• LIS: closed
- E5C4 ⊥ STOKOE COMBINING MACRON BELOW  
→ 0331 ⊥ combining macron below
- E5C5 ⊥ STOKOE COMBINING EQUALS SIGN BELOW  
• LIS  
→ 0347 ⊥ combining equals sign below
- E5C6 ⊥ STOKOE COMBINING LEFT ARROWHEAD BELOW  
→ 0354 ⊥ combining left arrowhead below
- E5C7 ⊥ STOKOE COMBINING RIGHT ARROWHEAD BELOW  
→ 0355 ⊥ combining right arrowhead below

### Divider symbols

- E5D0 ≡ STOKOE DIVIDER-HANDSHAPE  
• BSL uses a variant
- E5D1 ≡ STOKOE DIVIDER-MOVEMENT  
• LIS
- E5D2 | STOKOE DIVIDER-1  
→ 007C | vertical line
- E5D3 † STOKOE DIVIDER-1A  
• Stokoe 1965 η
- E5D4 / STOKOE DIVIDER-2  
→ 002F / solidus
- E5D5 + STOKOE DIVIDER-3  
→ 002B + plus sign
- E5D6 : STOKOE DIVIDER-4  
• ASL
- E5D7 [ STOKOE LEFT SQUARE BRACKET  
• BSL: used in sig, not sure it is used elsewhere
- E5D8 ] STOKOE RIGHT SQUARE BRACKET  
• BSL: used in sig, not sure it is used elsewhere
- E5D9 ( STOKOE LEFT PARENTHESIS
- E5DA ) STOKOE RIGHT PARENTHESIS

### Unknown symbols

- E5DB ◊ STOKOE UNKNOWN SYMBOL-1  
• Stokoe 1965 η
- E5DC ≡ STOKOE UNKNOWN SYMBOL-2  
• SS
- E5DD † STOKOE UNKNOWN SYMBOL-3  
• SS

### DSE arrows and other movement symbols

- E5E0 ↻ STOKOE MOVEMENT-REPEATED CIRCLE TO THE RIGHT
- E5E1 ↻ STOKOE MOVEMENT-LARGE CIRCLE
- E5E2 ↻ STOKOE MOVEMENT- SMALL CIRCLE

### SS arrows and other movement symbols

- E5E3 ↻ STOKOE GRAPHIC MOVEMENT-REPEATED CONTACT
- E5E4 → STOKOE GRAPHIC MOVEMENT-DIRECTION  
→ 27F6 → long rightwards arrow
- E5E5 → STOKOE GRAPHIC MOVEMENT-DIRECTION WITH DISTINCT FINISH

E5E6	→	STOKOE GRAPHIC MOVEMENT-REPETITIVE
E5E7	↔	STOKOE GRAPHIC MOVEMENT-BACK AND FORTH
E5E8	↔↔	STOKOE GRAPHIC MOVEMENT-ALTERNATING
E5E9	↷	STOKOE GRAPHIC MOVEMENT-ARC
E5EA	↷↷	STOKOE GRAPHIC MOVEMENT-GRADUAL
E5EB	↷↷↷	STOKOE GRAPHIC MOVEMENT-WAVE
E5EC	↷↷↷↷	STOKOE GRAPHIC MOVEMENT-ROTARY
E5ED	↷↷↷↷↷	STOKOE GRAPHIC MOVEMENT-ZIGZAG
E5EE	↷↷↷↷↷↷	STOKOE GRAPHIC MOVEMENT-REPEATED HANDSHAPE CHANGE
E5EF	↷↷↷↷↷↷↷	STOKOE GRAPHIC MOVEMENT-MOVING CIRCULAR
E5F0	○	STOKOE GRAPHIC MOVEMENT-CIRCULAR → 27F2 ↺ anticlockwise gapped circle arrow
E5F1	⊙	STOKOE GRAPHIC MOVEMENT-ALTERNATING CIRCULAR
E5F2	↷	STOKOE GRAPHIC MOVEMENT-HAND ROTATION
E5F3	↷↷	STOKOE GRAPHIC MOVEMENT-REPETITIVE HAND ROTATION
E5F4	↷↷↷	STOKOE GRAPHIC MOVEMENT-GAMBLING ALTERNATING
E5F5	↷↷	STOKOE GRAPHIC MOVEMENT-FINGER WAVING
E5F6	↷↷↷	STOKOE GRAPHIC MOVEMENT-THUMB BY FINGERS

### Control codes

E5F7	⏏	STOKOE CONTROL OPEN
E5F8	⏏	STOKOE CONTROL THEN
E5F9	⏏	STOKOE CONTROL CLOSE