

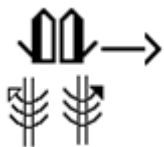


# SignAnimating

By André Lemyre

Quebec, Canada

SignWriting Symposium 2014



# Author



- I live in Quebec, Canada.
- I am a Bachelor of Social Work and in Computer Sciences.
- I worked as a counselor helping immigrants adjust to living in Canada, and now I work as a software tester in the medical field.
- I developed an activity guide to teach SignWriting to children.



André Lemyre

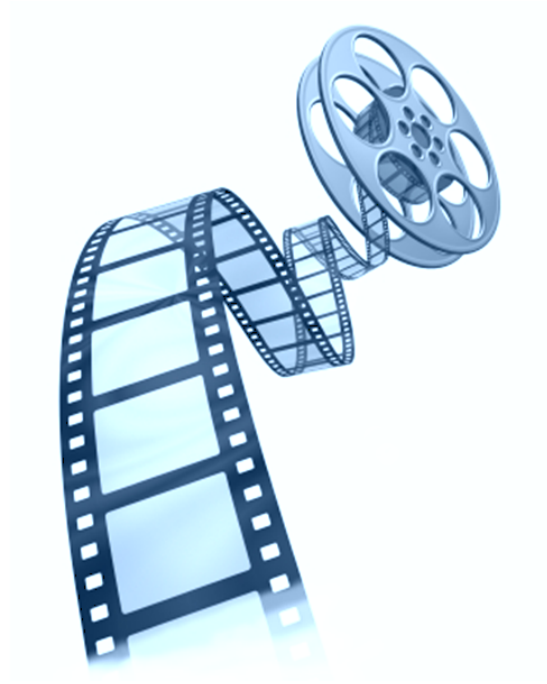
[andre-andre@hotmail.ca](mailto:andre-andre@hotmail.ca)

# Four Animation Guides

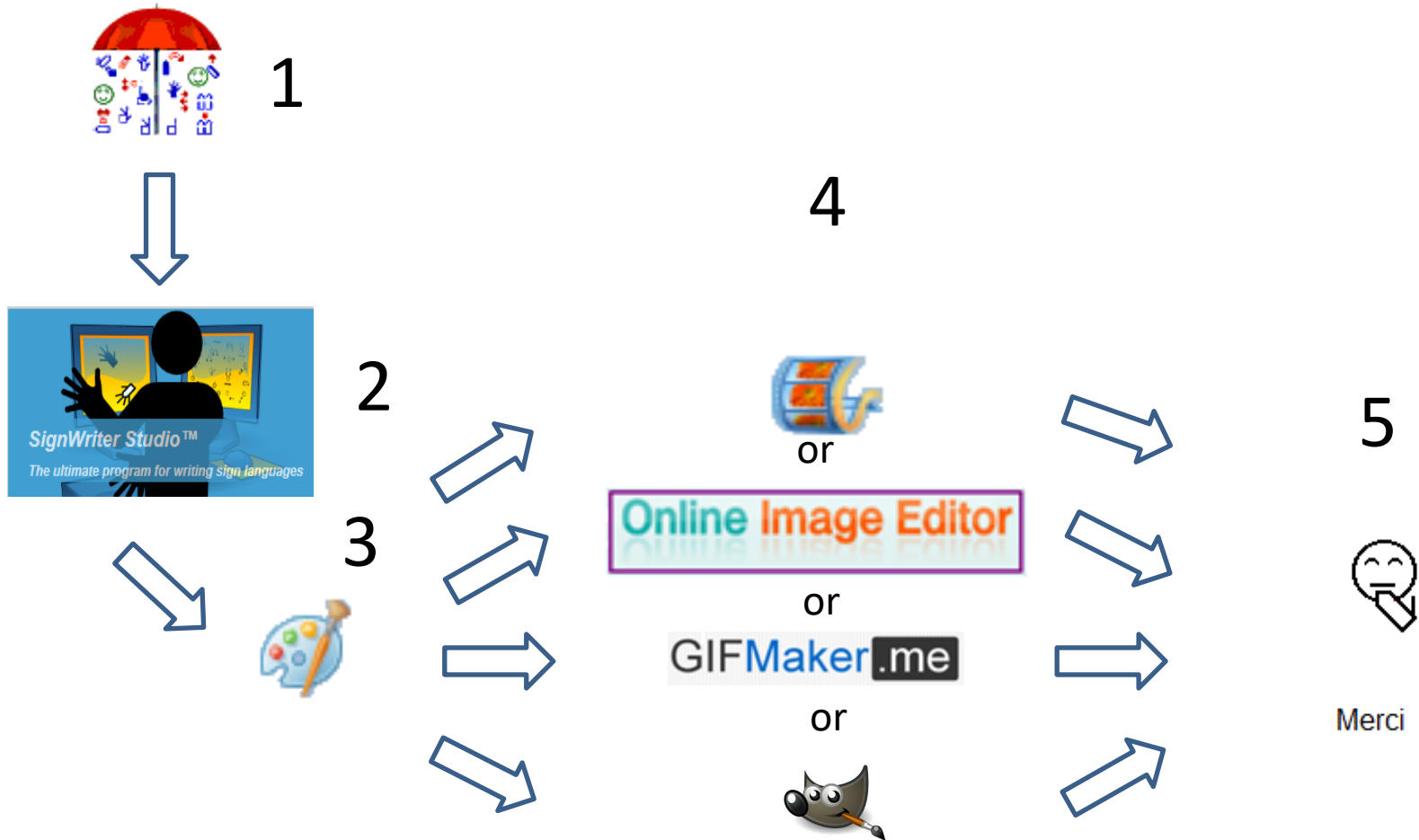
Four manuals are posted on the web:

- <http://www.signwriting.org/symposium/presentation0020.html>
- 1-Techniques is a step-by-step instructions on how to produce SignAnimating video or GIF files.
- 2-Design is a reflection on several possible layouts and the advantages and limitations of each one.
- 3-Symbols suggests conventions on how SignWriting symbols may be converted to SignAnimating symbol sequences.
- 4-SpeechAnimating is a reflection on how to animate SpeechWriting.

# 1-Techniques



# Animation Process Overview



# Free Softwares



- <http://www.signbank.org/signpuddle/>



- <http://signwriterstudio.com/>



- <http://windows.microsoft.com/fr-CA/windows/get-movie-maker-download>

Online Image Editor

- <http://www.online-image-editor.com/gifmaker/>

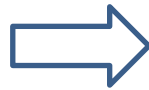
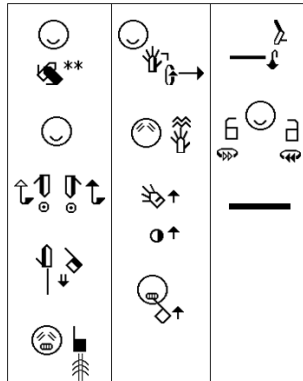
GIFMaker.me

- <http://gifmaker.me>

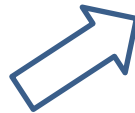
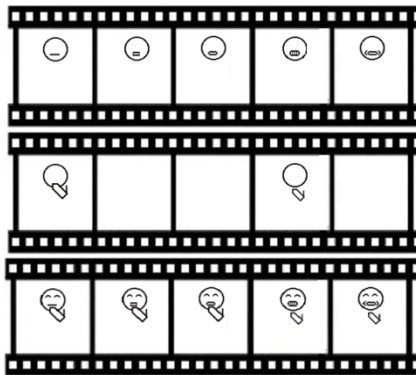


- <http://www.gimp.org/downloads/>

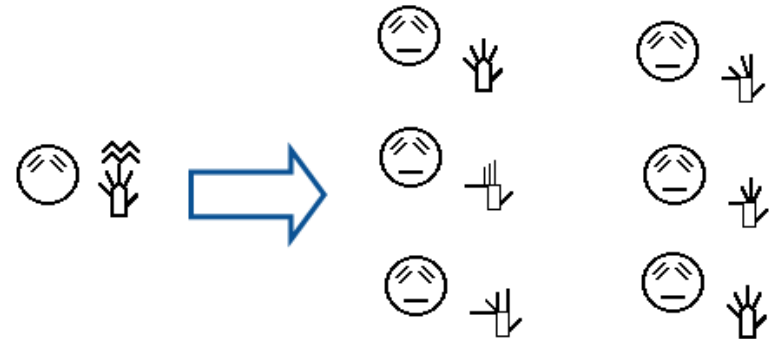
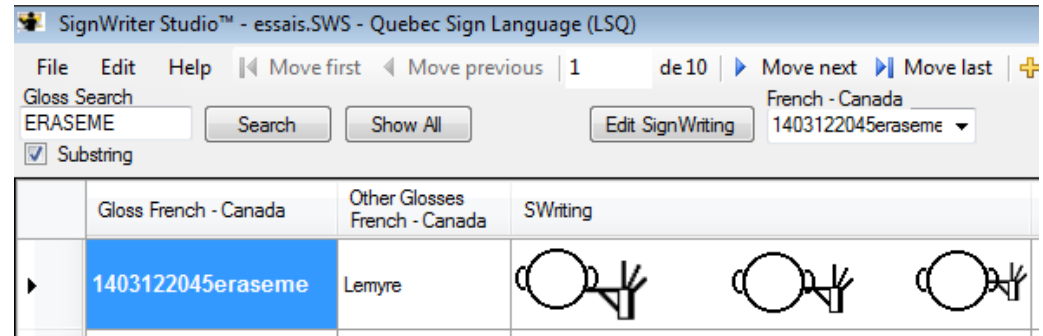
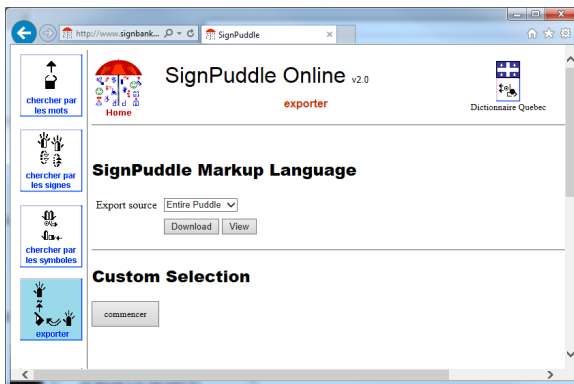
# Storyboard



kemm	40	sena	ibu

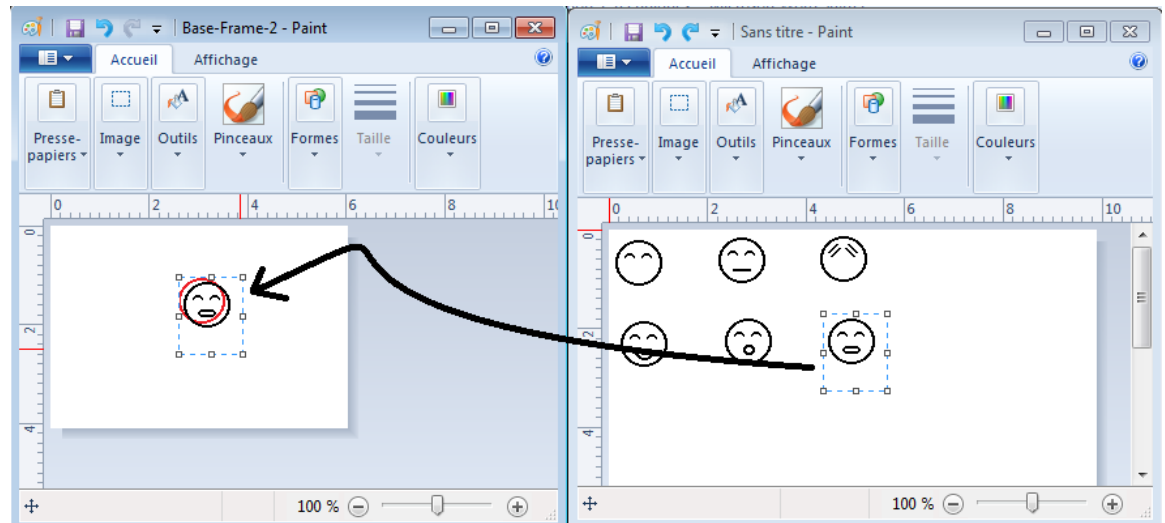
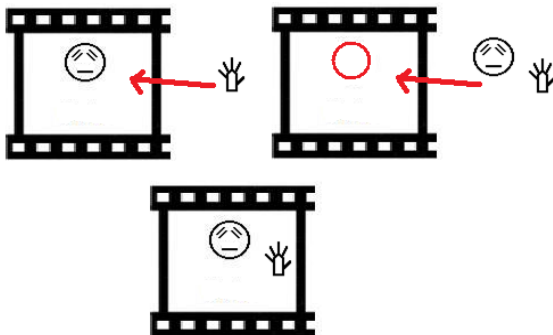
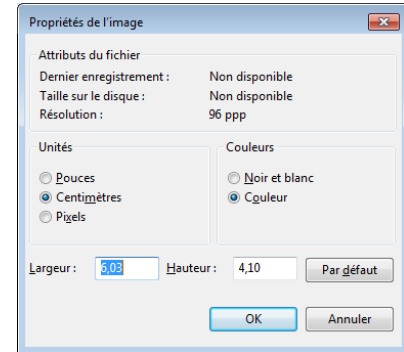
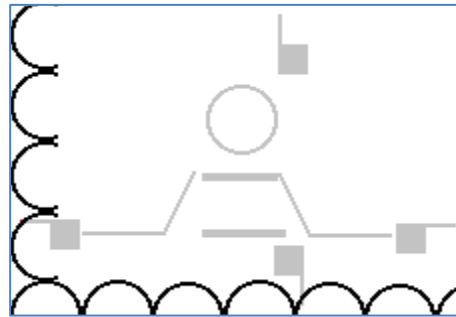
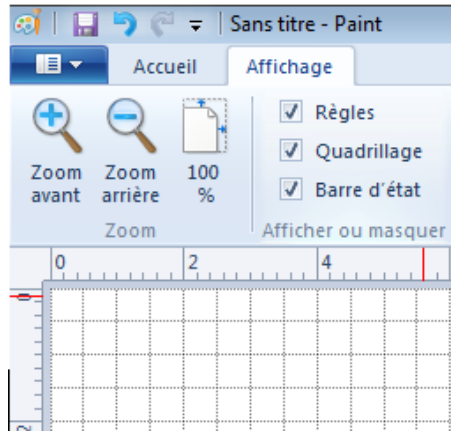


# SignWriting Steps

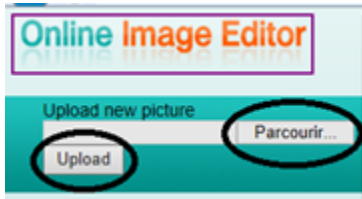




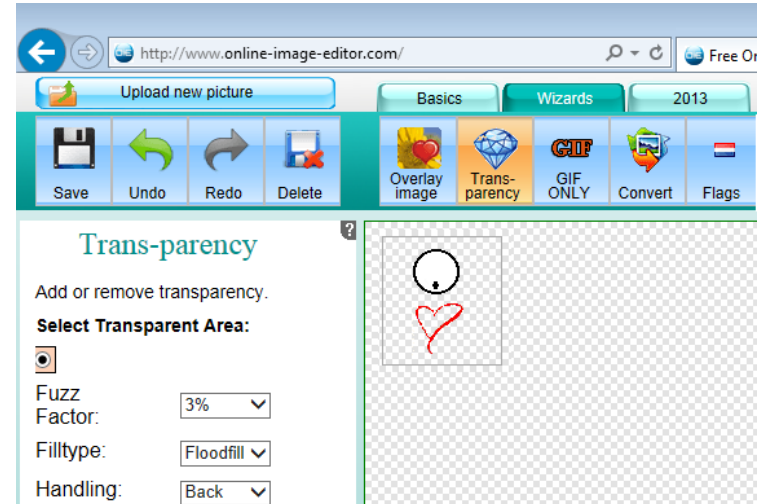
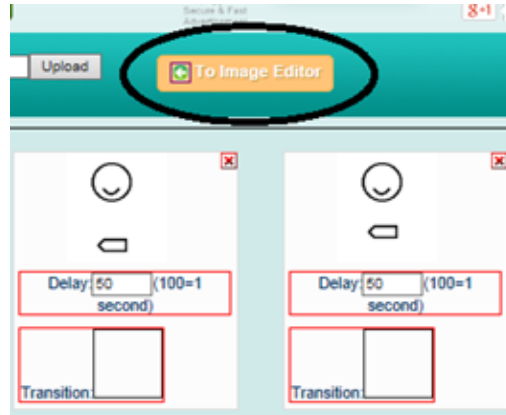
# Frame Preparation Steps



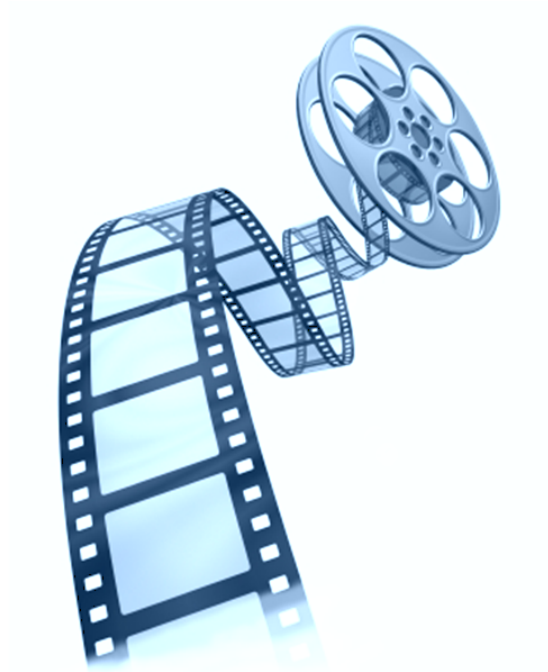
# Animation steps



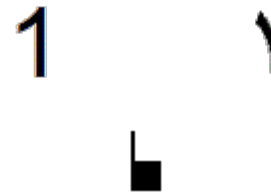
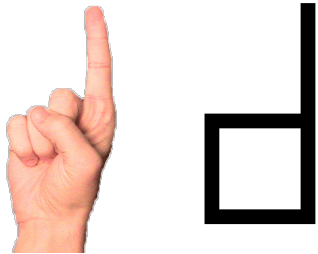
Maximum  
15 images



# 2-Design



# Designs

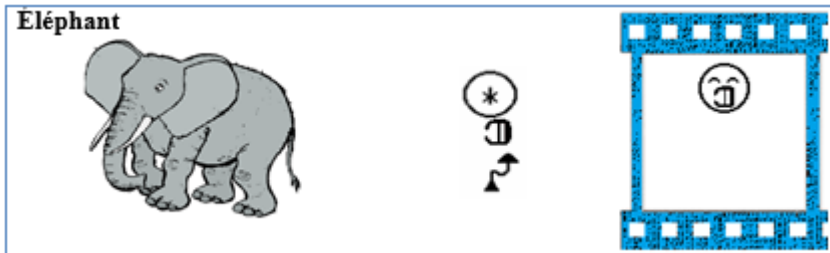
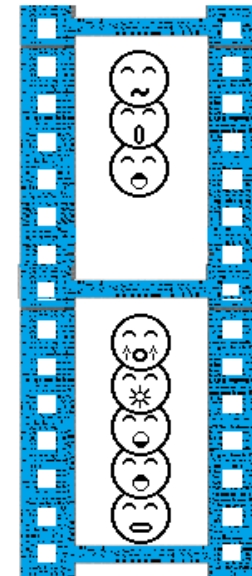
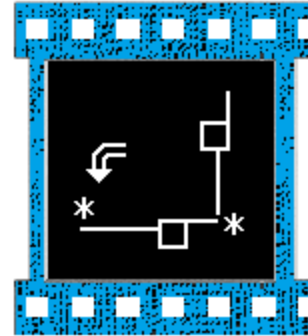
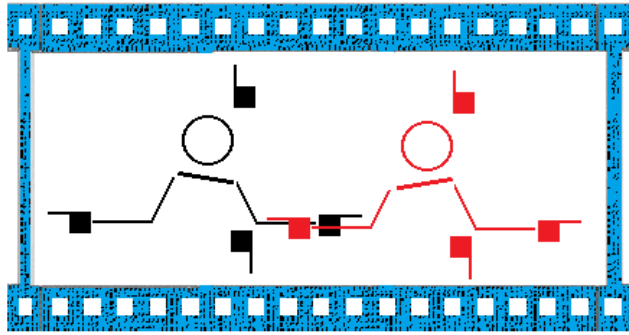


Frost, Adam (2010) ISWA 2010 Symbol Lessons Online Web lessons show moving all hand shapes with symbols.  
<http://www.signwriting.org/lessons/iswa/>

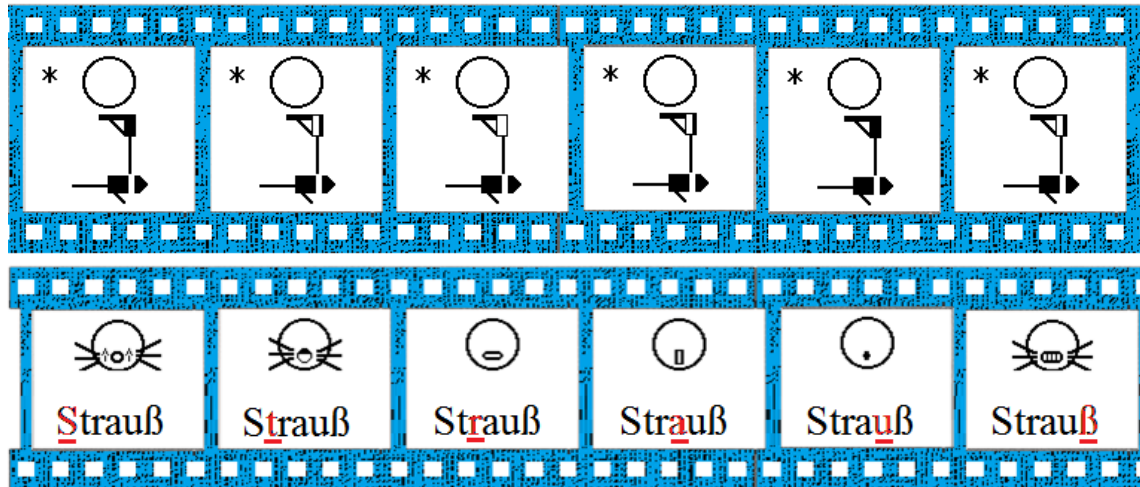
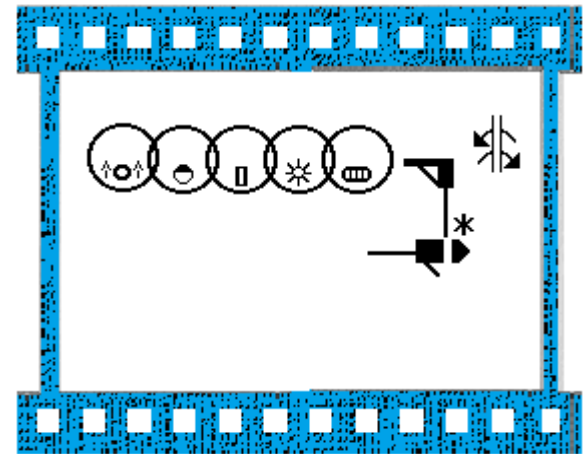
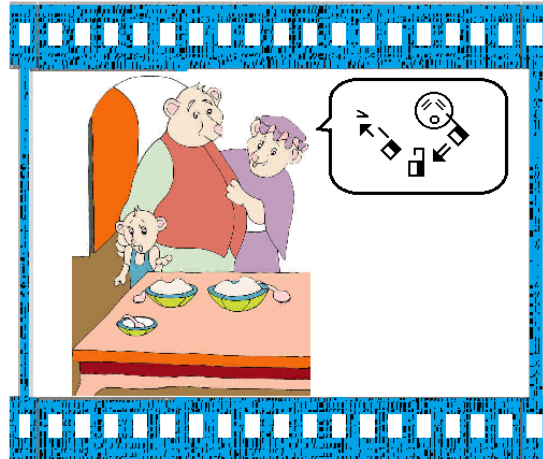
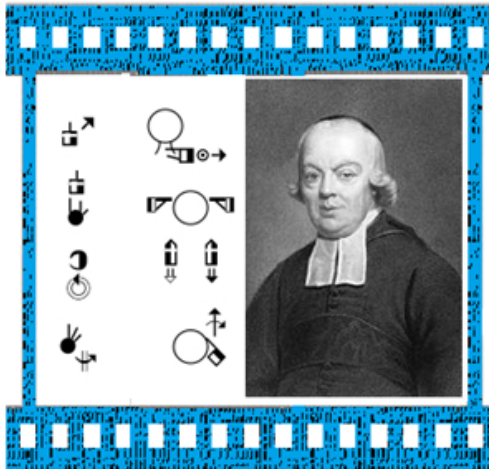
Bonne journée (Good day):  
1. LSQ: SignWrting  
2. LSQ: SignAnimating  
3. French SpeechWriting (bon zurne)  
4. LPC Cued Speech with SpeechAnimating



# Designs



# Designs



# Designs



See the following video from Brazil on You Tube, about captioning video in SignWriting using software developed in Brazil: Previsão do tempo com SW by Ronnie Fagundes de Brito.

<https://www.youtube.com/watch?v=gvtddaOVj-I>

# Symbols





# Same Rules



## SignAnimating 3-Symbols

(Non-official proposals based on *Lessons in SignWriting*. Text book, by Valerie Sutton, Center for Sutton Movement Writing, Inc. 2014)



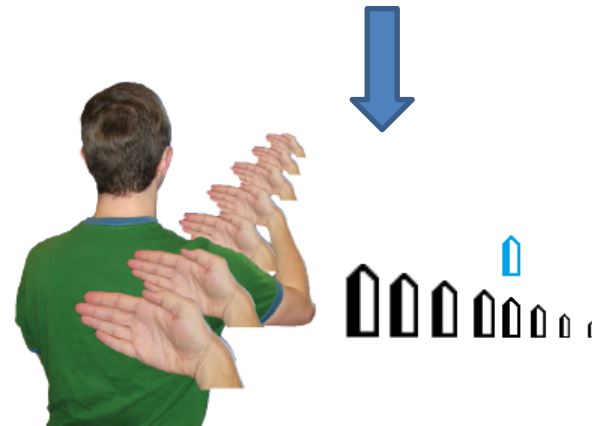
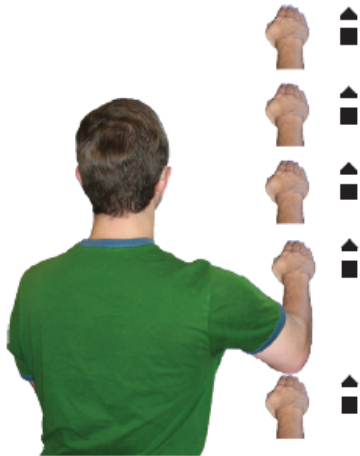
André Lemyre

### Lessons in SignWriting

Textbook  
by  
Valerie Sutton



# Difference: Zoom



Do not invent symbols!



# Wöhrmann's SpeechWriting



# Wöhrmann's SpeechWriting

The SpeechWriting system was invented by Stefan Wöhrmann.

He integrated it in animations.



1- Mundbildschrift  
Phonetic sound-production  
(Ostrich in German)



2- Mundbilder in GebärdenSchrift  
articulatory movement writing  
(Ostrich in German)

- <http://www.signwriting.org/symposium/presentation0002.html>
- <http://www.gebaerdenschrift.de/>

# Mundbildschrift

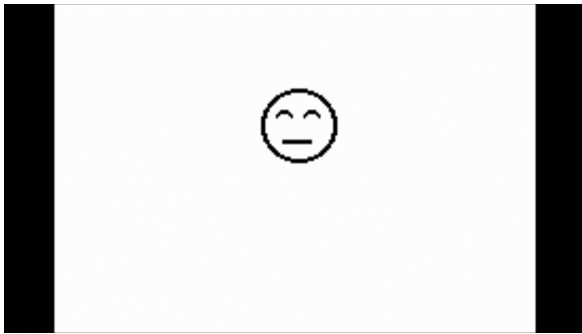
## **Mundbildschrift**

(exact translation: Mouth Picture Writing)

- A standardized writing system for picturing the sounds of human spoken language (speech).
- Compared to the International Phonetic Alphabet, Mundbildschrift is not as detailed and complete but easy to read and sufficient enough to support even young deaf students in their articulation process to develop better spoken language skills.
- It is used like a spelling system for writing complete words in mouth pictures, and can be applied to any spoken language.

# Mundbildschrift

## Phonetic sound-production



Video



Merçi

Animated gif

Merçi beaucoup (Thank you in French and LSQ)

# Mundbilder









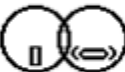










## Mundbilder

(writing what is seen, when Lip Reading)

- A standardized writing system for picturing the way the lips look when a person speaks words.
- These symbols do not represent sounds but can be associated with spoken words, that are seen on the lips when “Lip Reading”.



# Wöhrmann's SpeechWriting Symbols















 <b>Δ a:</b>	 <b>ε ε:</b>	 <b>ə e:</b>	 <b>i i:</b>
 <b>θ θ: ɔ θ:</b>	 <b>u: ʊ y y:</b>	 <b>au</b>	 <b>ɔy</b>
 <b>ai</b>	 <b>m</b>	 <b>b p</b>	 <b>f v</b>
 <b>l</b>	 <b>d n ŋ t</b>	 <b>ʒ ʃ</b>	 <b>z s ks ts</b>
 <b>j</b>	 <b>k r ɣ</b>	 <b>x ç</b>	



# Wöhrmann's SpeechWriting Consonants

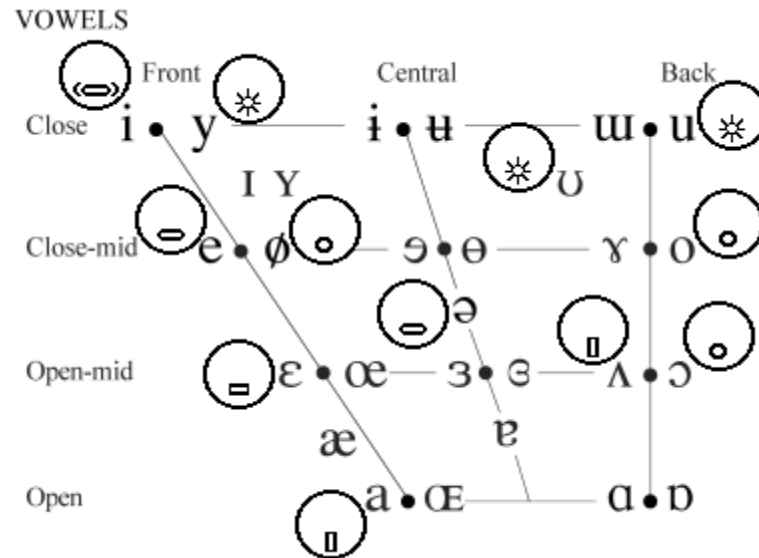
CONSONANTS (PULMONIC)

© 2005 IPA

	Bilabial	Labiodental	Dental	Alveolar	Post alveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	 p b			 t d		t̡ d̡	c ɟ	 k g	q ɢ		ʔ
Nasal	 m	ɱ		 n		ɳ	ɲ	 ŋ	ɴ		
Trill				r					ʀ		
Tap or Flap				 ɾ		ɽ	 ç	 x			
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	 j	ɰ			
Lateral approximant				 l		ɭ	ʎ	ʟ			

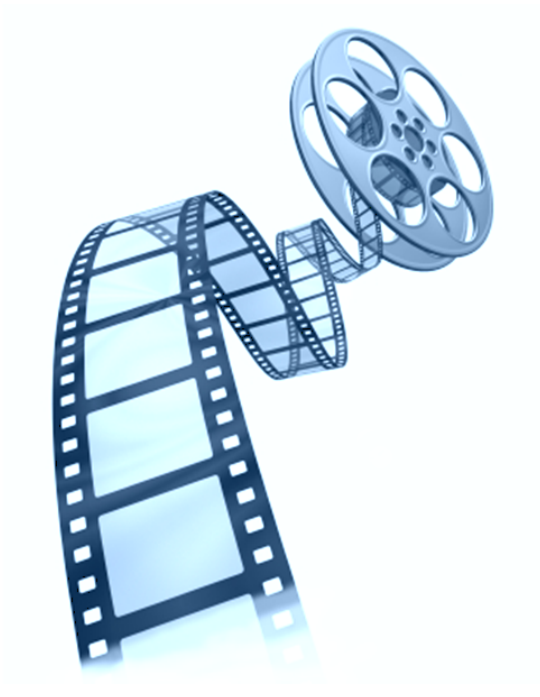
Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.

# Wöhrmann's SpeechWriting Vowels









au	ɔy	ai	ks	ts









# Cued Speech
















# Vowels

Hand positions to code vowels Language Parlé Complété LPC (French Cued Speech)	SignWriting Positions	French Vowels	Cued Speech Code
		in - eu	p pommette (cheekbone)
		[a] - [o] - e	c côté (side)
		i - on - an	b bouche (mouth)
		ou - è - [ɔ]	m menton
		un - é - u - [ɑ]	g gorge (throat)

# Consonants

Finger keys to code consonants	French consonants	Cued Speech Code	Finger keys to code consonants	French consonants	Cued Speech Code
	p - d - j (/ʒ) pied, <u>d</u> os, joue, <u>g</u> enou	1		m - t - f and each vowel not preceded by a consonant <u>m</u> ain, tête, <u>f</u> ront	5
	k - v - z <u>c</u> ou, <u>y</u> entre, zèbre	2		l - ch - gn - /w/ <u>l</u> obe, <u>ch</u> air, <u>gn</u> agner, <u>t</u> oi	6
	s - r (and English r) <u>s</u> ang, <u>r</u> ein, reggae	3		g - dj (/dʒ) <u>g</u> orge, <u>J</u> oe	7
	b - n - /q/ <u>b</u> ras, <u>n</u> ez, <u>c</u> uir	4		y (/j) - tch œil, <u>ch</u> ips	8

# Animations Analysis

Construction of a Cued Speech Animation					
French	Journée (day)				
SpeechWriting					
Phonetic	j	u	R	n	e
Cued speech keys					
Cued speech codes	jm		Rc	ng	
Cued speech animation					

# Conclusion

With this series of 4 SignAnimating documents, we demonstrated that the SignWriting symbol set is complete and sufficient. It can be used for accurate animations of sign languages and spoken visemes when combined with SpeechWriting.



Merci

Merçi beaucoup  
(Thank you in French and LSQ)

# Bibliography

Documents can be downloaded for free at:

- <http://www.signwriting.org/archive/docs2/sw0116-Lessons-SignWriting.pdf>
- <http://www.signwriting.org/lessons/books/>
- <http://www.signwriting.org/lessons/web/>
- <http://www.signwriting.org/lessons/elessons/>
- <http://www.signwriting.org/archive/docs5/sw0493-SWLessonsBook-Parkhurst-EngLSE.pdf>
- <http://www.signwriting.org/lessons/iswa/>
- <http://std.dkuug.dk/jtc1/sc2/wg2/docs/n4090.pdf>



# Bibliographie Française

**Leçons en français pour apprendre à écrire les signes:**

**Sutton, Valerie (2002) [Leçons en SignWriting... lire et écrire les mouvements des langues des signes. Les langues des signes sont des langues écrites.](#)**

Center for Sutton Movement Writing, Inc. La Jolla, California. USA. Disponible en téléchargement gratuit:

- <http://www.signwriting.org/archive/docs3/sw0221-Lecons-SW-Francais-1.pdf>
- <http://www.signwriting.org/archive/docs3/sw0222-Lecons-SW-Francais-2.pdf>
- <http://www.signwriting.org/archive/docs3/sw0223-Lecons-SW-Francais-3.pdf>
- <http://www.signwriting.org/archive/docs3/sw0224-Lecons-SW-Francais-4.pdf>