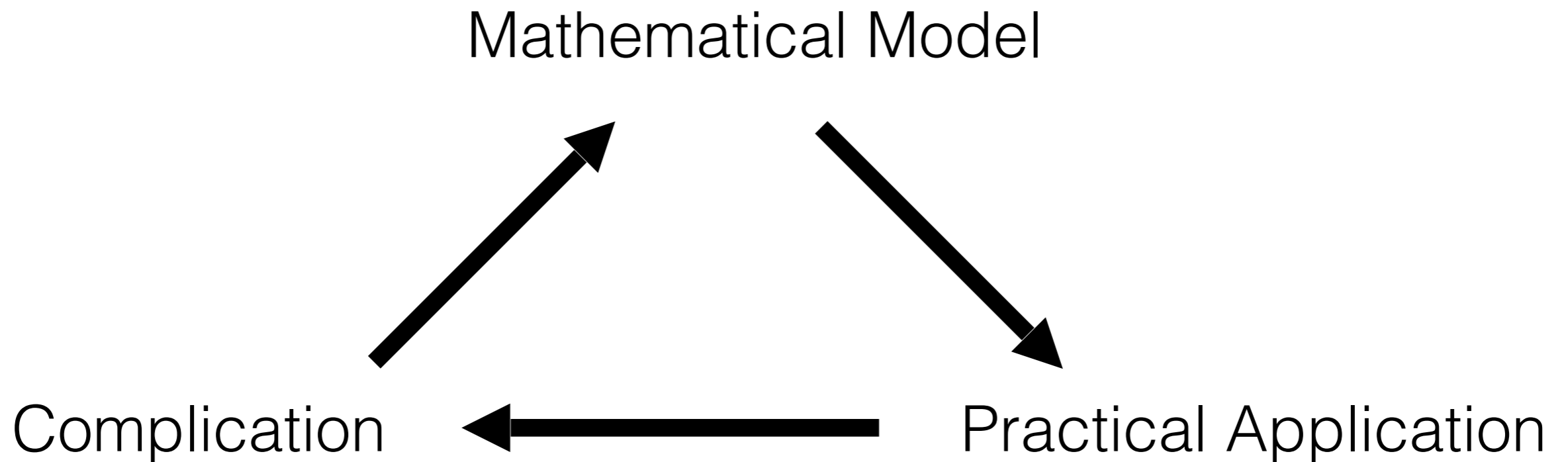# The SignPuddle Standard for SignWriting Text

presented by Stephen E Slevinski Jr

in association with the Center for Sutton Movement Writing

discussing draft-slevinski-signwriting-text-03

How do we encode the SignWriting Script?

Mathematical Model

Complication

Practical Application

Outline

1. Background of SignWriting Text

2. Benefits of SignWriting Text

3. Elements of SignWriting Text

4. Extending the standard

1. Background

- My background

- Historical foundation

- SignPuddle Beginnings

- Naming the signs

My Background

- Math major

- Love of literacy

- Raised children with sign language

- Deaf friends in Pittsburgh, PA

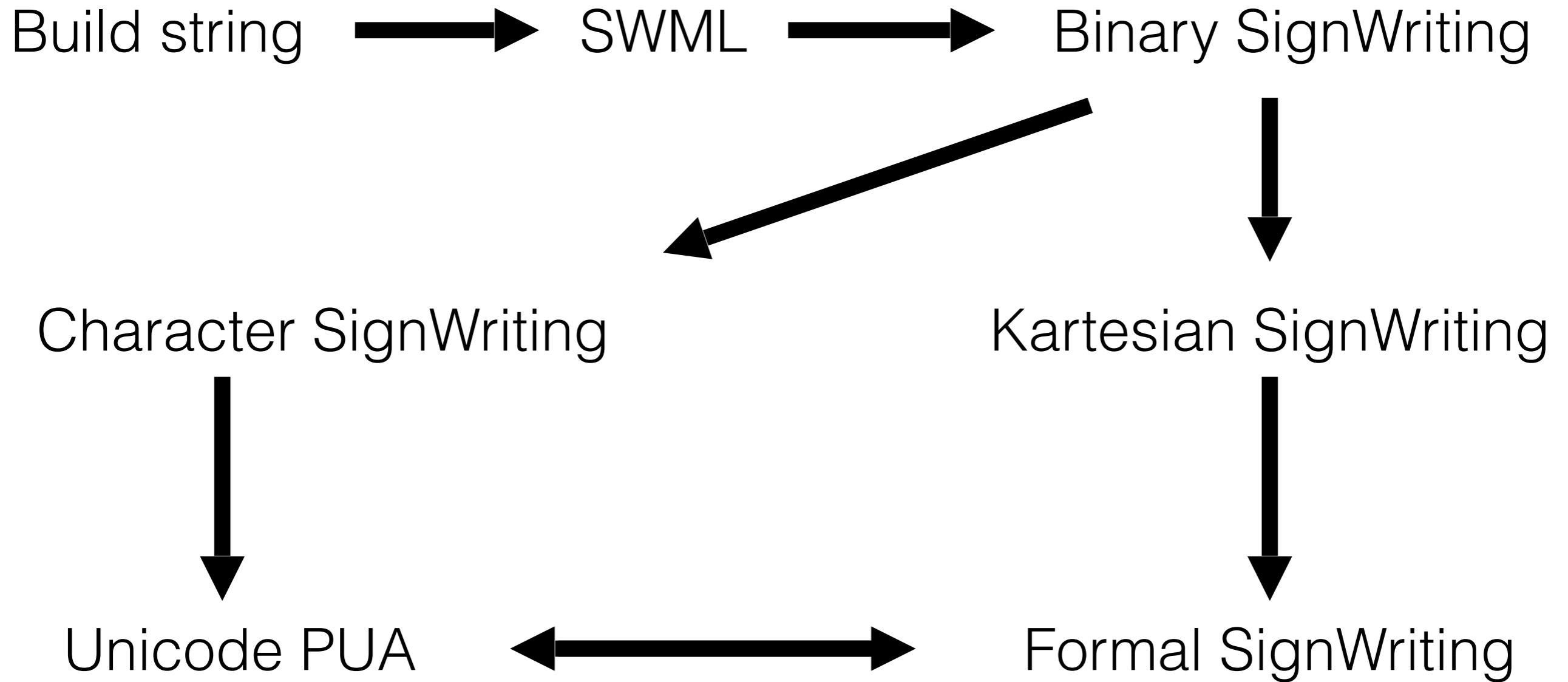- 10 year collaboration with Valerie Sutton

Historical Foundation

- SignWriting invented in 1974

- Computerization began in 1984

- SignWriter Dos created by Richard Gleaves

- Standardized symbol sets in 1999, 2002, and 2004

SignPuddle Beginnings

- Screen captures of sign images

- Gloss file names

- Drag & drop construction

Naming the signs

Build string → SWML → Binary SignWriting

Character SignWriting   Kartesian SignWriting

Unicode PUA ←→ Formal SignWriting

2. Benefits of the standard

- Universal for all sign languages

- Beautiful images

- Real sign language text

- Efficient sorting

- Powerful searching

- Growing body of work

SignWriting is Universal

American Sign Language, Arabian Sign Languages, Australian Sign Language, Bolivian Sign Language, Brazilian Sign Language, British Sign Language, Catalan Sign Language, Colombian Sign Language, Czech Sign Language, Danish Sign Language, Dutch Sign Language, Ethiopian Sign Language, Finnish Sign Language, Flemish Sign Language, French-Belgian Sign Language, French Sign Language, German Sign Language, Greek Sign Language, Irish Sign Language, Italian Sign Language, Japanese Sign Language, Malawi Sign Language, Malaysian Sign Language, Maltese Sign Language, Mexican Sign Language, Nepalese Sign Language, New Zealand Sign Language, Nicaraguan Sign Language, Norwegian Sign Language, Peruvian Sign Language, Philippines Sign Language, Polish Sign Language, Portuguese Sign Language, Quebec Sign Language, South African Sign Language, Spanish Sign Language, Swedish Sign Language, Swiss Sign Language, Taiwanese Sign Language, Tunisian Sign Language, and more…

http://www.signwriting.org/about/who/

Beautiful Images

Scalar Vector Graphics
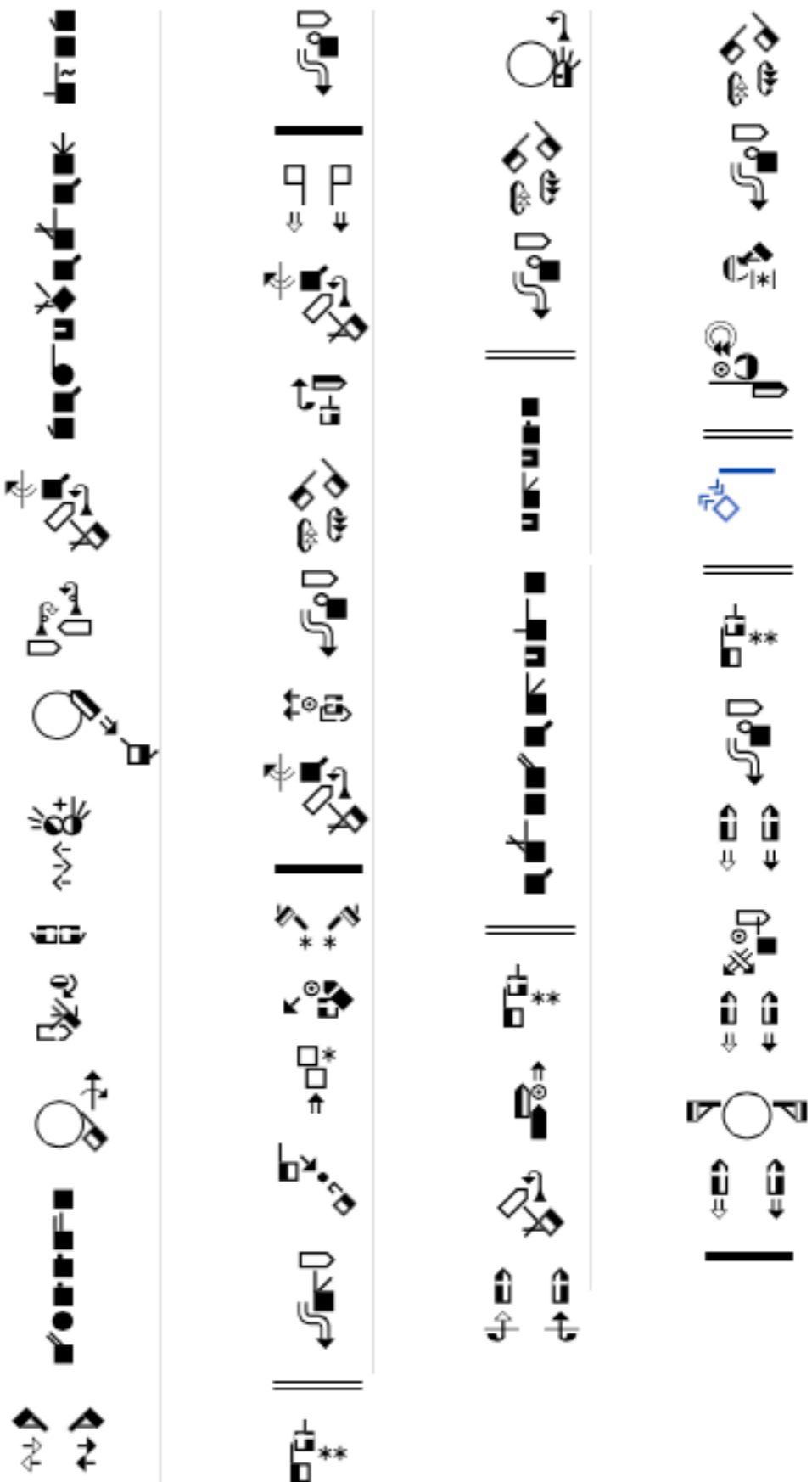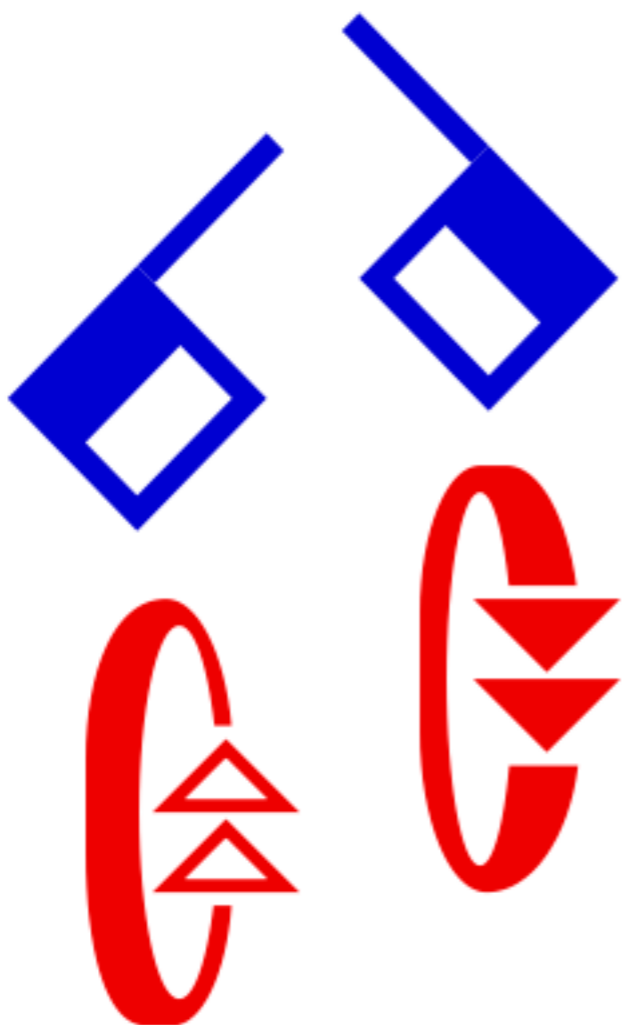
Real sign language text

grammatically correct
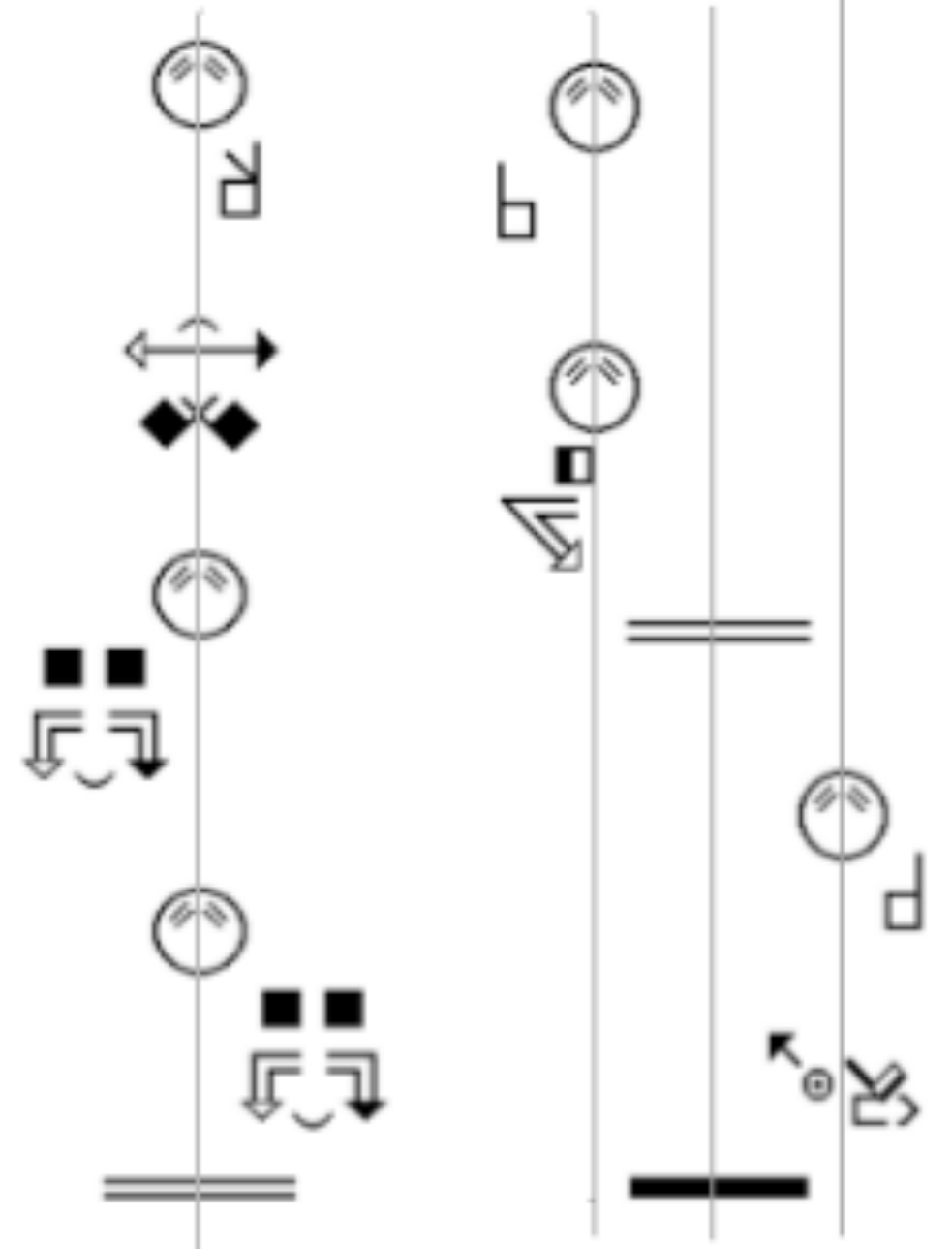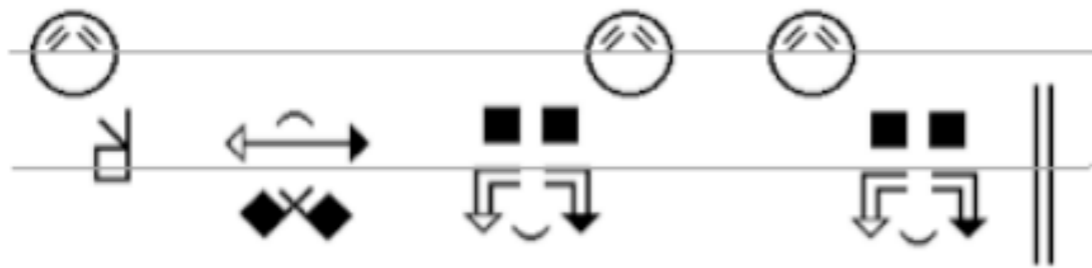
Efficient Sorting

Supports multiple theories

Syllable 1
Hands
Beginning
Position

Syllable 2
Movement
Between
Syllable 1 & 3

Syllable 3
Hands
Ending
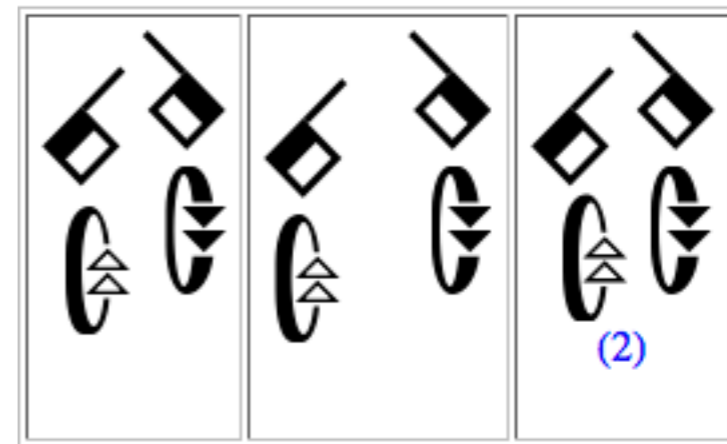Position

Syllable 4
Location
& Facial
Expressions
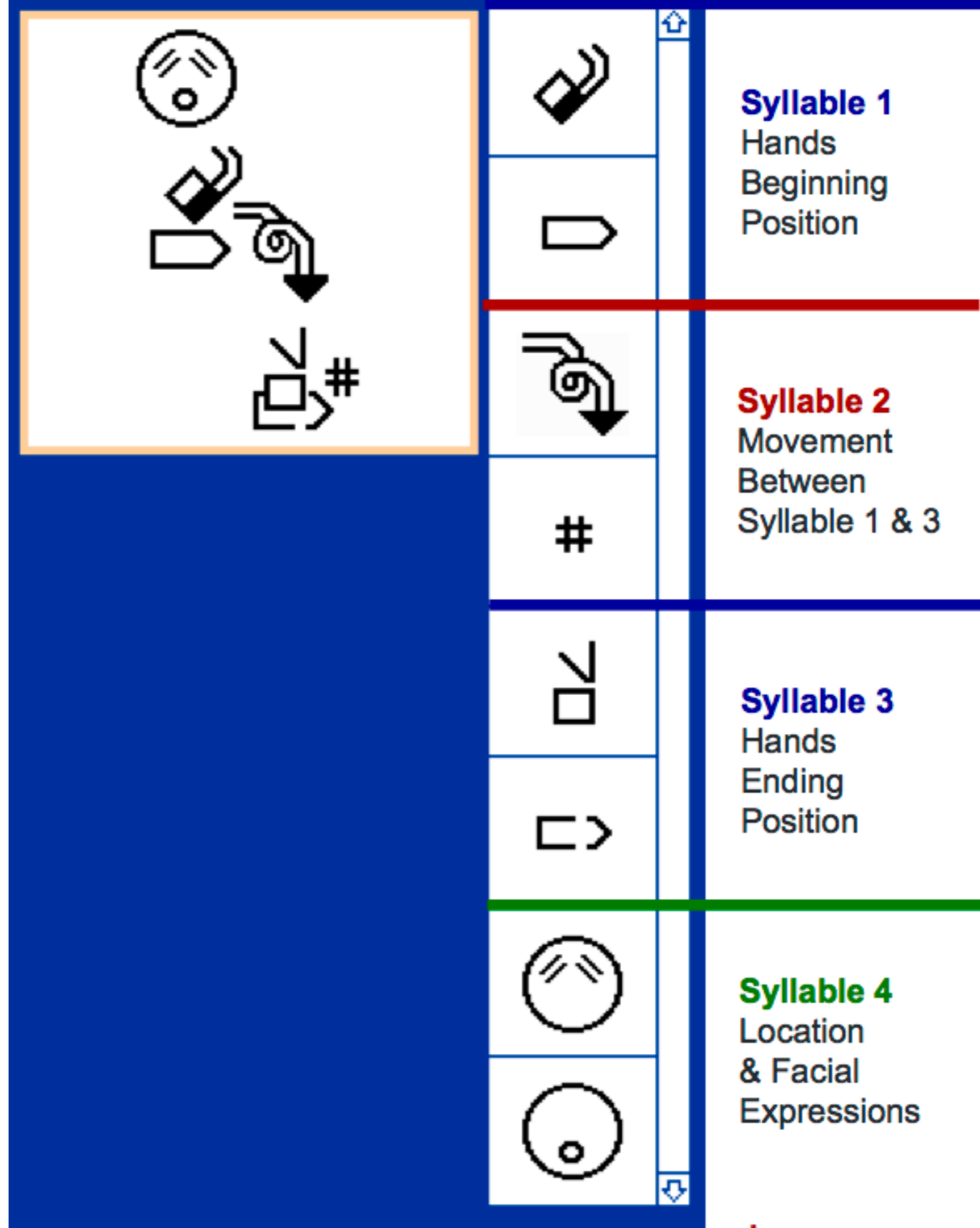
by
Valerie Sutton

Powerful Searching

- Find exact symbols

- Find general symbols

- Find symbol ranges

- Ignore location

- Use approximate location

Growing body of work
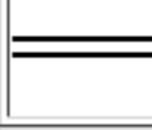
3. Elements of the Standard

- International SignWriting Alphabet 2010

- Writer control and flexibility

- Visual Image

- Mathematical Name

- Regular Expressions

- 2 Years of Stability

International SignWriting Alphabet

ISWA 2010

- Grapheme

- Symbol

- Hierarchy

- Encoding

Writer Control and Flexibility

Symbol selection, placement, and order

- No limitations

- No gatekeepers

- No waiting

Visual Image

2-Dimensional Order
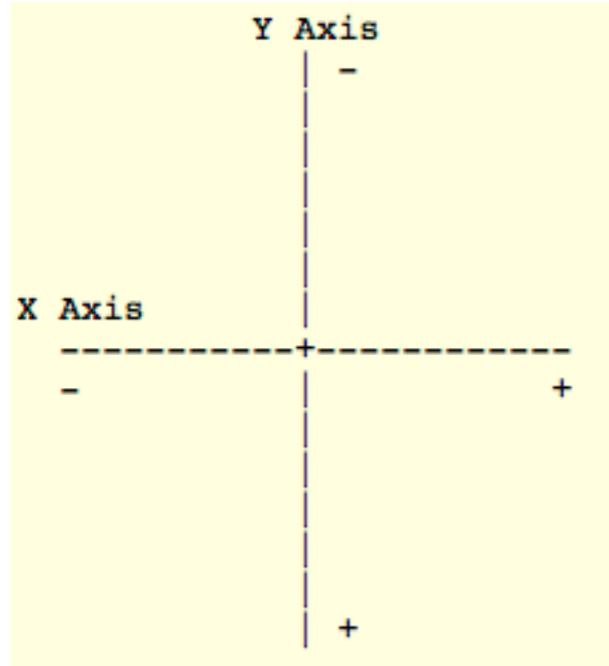
- PNG

- SVG

- TrueType

Mathematical Name

- Plain text string of characters

- Structured with tokens

- 2-dimensional space

- Optional 1-dimensional order

Regular Expressions

- Pattern matching

- Efficient processing

- Automatic conversion

2 Years of Stability

- January 12th, 2012

- ASCII based

- Unicode - Private Use Area

4. Extending the Standard

- Embrace the standard

- Maintain compatibility

- Experiment and try something new

Embrace the Standard

- SignTyp

- SignWriter Studio

- DELEGS Online

- Wikimedia Incubator

- TrueType Font development

Maintain Compatibility

- SWIFT

- Alternate ISWA 2010 fonts

Experiment and Try Something New

- Other symbol sets

- Other coordinate system

- Other internal structure

- Other character sets

- Other input methods