

Title: SignWriting Design, With Three Examples and Their Representation

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Action: For consideration by the UTC

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SignWriting Design

The SignWriting design described below is supported by software and fonts created by the Center for Sutton Movement Writing. The design covers two models.

Plane 15 PUA Encoding Design

This model assigns 1,179 symbol-only characters to the PUA in Plane 15. There are 5 structural markers, corresponding to A, B, L, M, and R in the formal SignWriting notation. There are 6 fill modifiers and 16 rotation modifiers. There are also 500 number characters, used in pairs to correspond to the "NNNxNNN" coordinate system of the formal SignWriting notation.

Plane 15 PUA Summary

Description	Formal SignWriting	Character-SignWriting
Sequence Marker	A	U+FD800
SignBox Markers	B, L, M, R	U+FD801..U+FD804
Fill Modifiers	0 to 5	U+FD810..U+FD815
Rotation Modifiers	0 to 9 and a to f	U+FD820..U+FD82F
Symbol Base	S100 to S38b	U+FD830..U+FDABB
Numbers	250 to 749	U+FDE06..U+FDFF9

Plane 16 PUA Encoding Design

The second model assigns 37,811 characters to Plane 16, with a single character per symbol.

Symbol key conversion from S10000 to U+100001.

```
var code = ((parseInt(key.slice(1,4),16) - 256) * 96) + ((parseInt(key.slice(4,5),16))*16)
+ parseInt(key.slice(5,6),16) + 1;
```

Example:

key = "S32127"

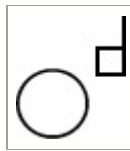
key.slice(1,4) = "321", key.slice(4,5) = "2"; key.slice(5,6) = "7"

var code = $((321_{16} - 256) * 96) + (2_{16} * 16) + (7_{16} + 1) = 52320 + 32 + 8 = 52360 = CC88_{16}$

Plane 16 PUA code = 100000 + CC88 = U+10CC88

Example 1

Example 1 Image



Formal SW representation: M536x518S2ff00482x483S10000521x457

Example 1 Details

Formal SW			Plane 15 PUA				Plane 16 PUA
Sign	F/R	Numbers	Sign	Fill	Rotation	Numbers	Glyph ID
M		536x518	FD803			FDF24 FDF12	
S2ff	00	482x483	FDA24	FD810	FD820	FDEEE FDEEF	10BFA1
S100	00	521x457	FD830	FD810	FD820	FDF15 FDED5	100001

Example 2

Example 2 Image



Formal SW representation:

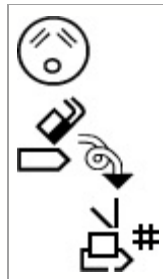
M518x524S2ff10482x495S34210490x510S31a30489x498S32410491x485S32127497x476

Example 2 Details

Formal SW			Plane 15 PUA				Plane 16 PUA
Sign	F/R	Numbers	Sign	Fill	Rotation	Numbers	Glyph ID
M		518x524	FD803			FDF12 FDF18	
S2ff	10	482x495	FDA24	FD811	FD820	FDEEE FDEFB	10BFB1
S342	10	490x510	FDA72	FD811	FD820	FDEF6 FDF0A	10D8D1
S31a	30	481x498	FDA4A	FD813	FD820	FDEF5 FDEFE	10C9F1
S324	10	491x485	FDA54	FD811	FD820	FDEF7 FDEF1	10CD91
S321	27	497x476	FDA51	FD812	FD827	FDEFD FDEE8	10CC88

Example 3

Example 3 Image



Formal SW representation:

AS11817S15a06S2960bS20b00S10e30S15a36S30a00S34410
M552x611S30a00482x483S34410495x504S11817491x523S15a06482x549S2960b51

2x542S15a36513x599S10e30517x574S20b00539x587

Example 3 Details

Formal SW			Plane 15 PUA				Plane 16 PUA
Sign	F/R	Numbers	Sign	Fill	Rotation	Numbers	Glyph ID
A			FD800				
S118	17		FD848	FD811	FD827		100918
S15a	06		FD88A	FD810	FD826		1021C7
S296	0b		FD9C6	FD810	FD82B		10984C
S20b	00		FD93B	FD810	FD820		106421
S10e	30		FD83E	FD813	FD820		100571
S15a	36		FD88A	FD813	FD826		1021F7
S30a	00		FDA3A	FD810	FD820		10C3C1
S344	10		FDA74	FD811	FD820		10D991
M		552x611	FD803			FDF34 FDF6F	
S30a	00	482x483	FDA3A	FD810	FD820	FDEEE FDEEF	10C3C1
S344	10	495x504	FDA74	FD811	FD820	FDEFB FDF04	10D991
S118	17	491x523	FD848	FD811	FD827	FDEF7 FDF17	100918
S15a	06	482x549	FD88A	FD810	FD826	FDEEE FDF31	1021C7
S296	0b	512x542	FD9C6	FD810	FD82B	FDF0C FDF2A	10984C
S15a	36	513x599	FD88A	FD813	FD826	FDF0D FDF63	1021F7
S10e	30	517x574	FD83E	FD813	FD820	FDF11 FDF4A	100571
S20b	00	539x587	FD93B	FD810	FD820	FDF27 FDF57	106421
