



I18N BEST PRACTICES



06/02/2016



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AGENDA

i18n

Best practices

Unicode

Fonts

Input

Languages

Arabic

Japanese

Chinese

Korean



i18n

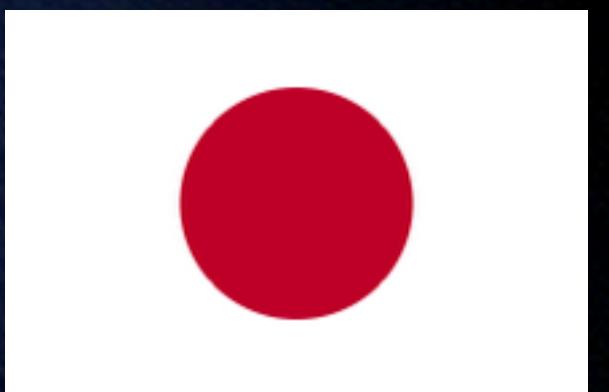




FIFA 16

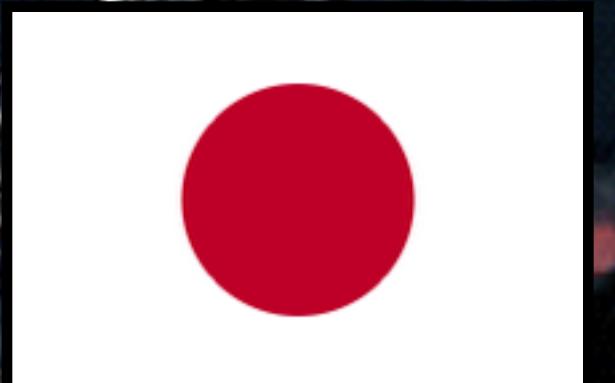
PLAY BEAUTIFUL







STAR WARS
BATTLEFRONT
EA





Best practices



unicode



<http://www.joelonsoftware.com/articles/Unicode.html>

ASCII Table (7 bits)

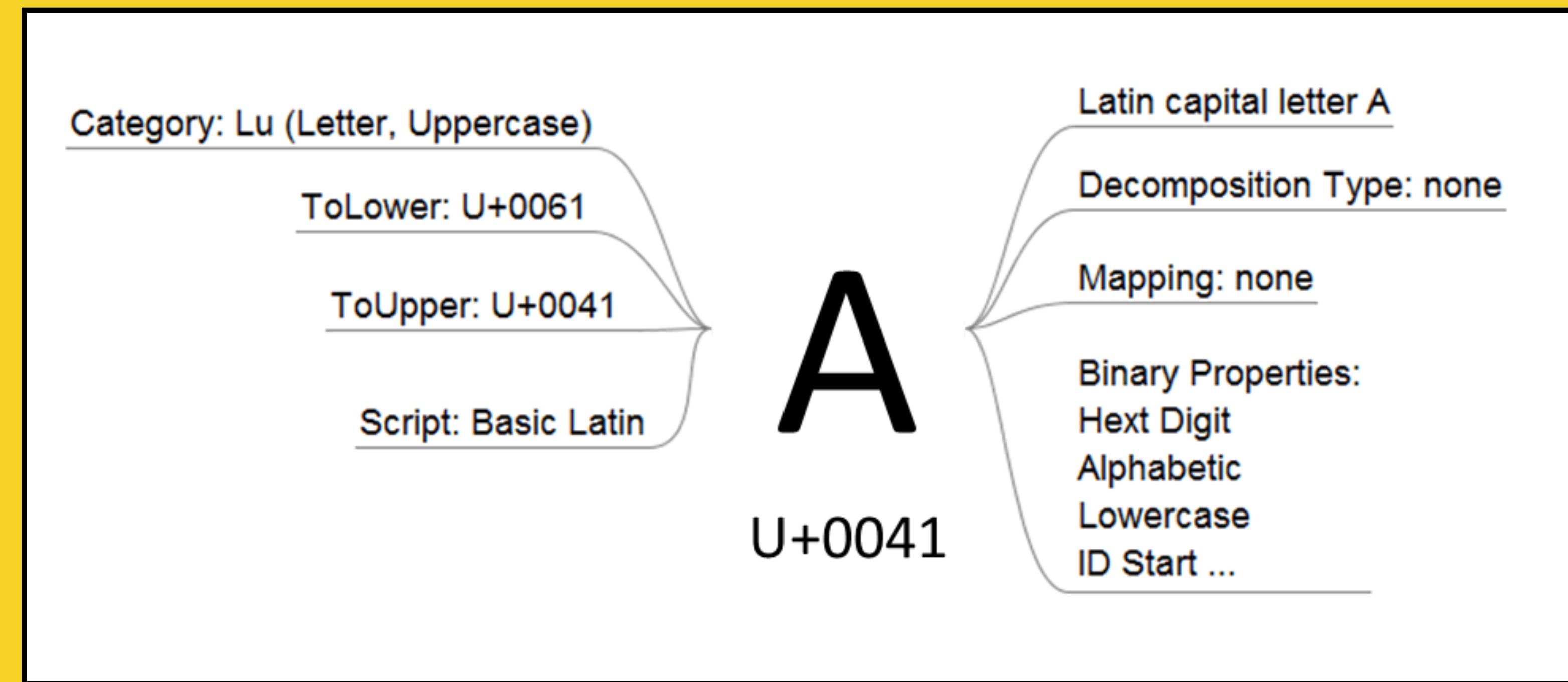
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NULL	SOH	STX	ETX	EDT	ENQ	ACK	BEL	BS	HT	LF	VT	FF	CR	SO	SI
1	DLE	DC1	DC2	DC3	DC4	NAK	SYN	ETB	CAN	EM	SUB	ESC	FS	GS	RS	US
2	SPC	!	"	#	\$	%	&	'	()	*	+	,	-	.	/
3	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
4	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5	P	Q	R	S	T	U	U	W	X	Y	Z	[\]	^	-
6	'	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
7	p	q	r	s	t	u	u	w	x	y	z	{	}	~	DEL	

CODEPAGES



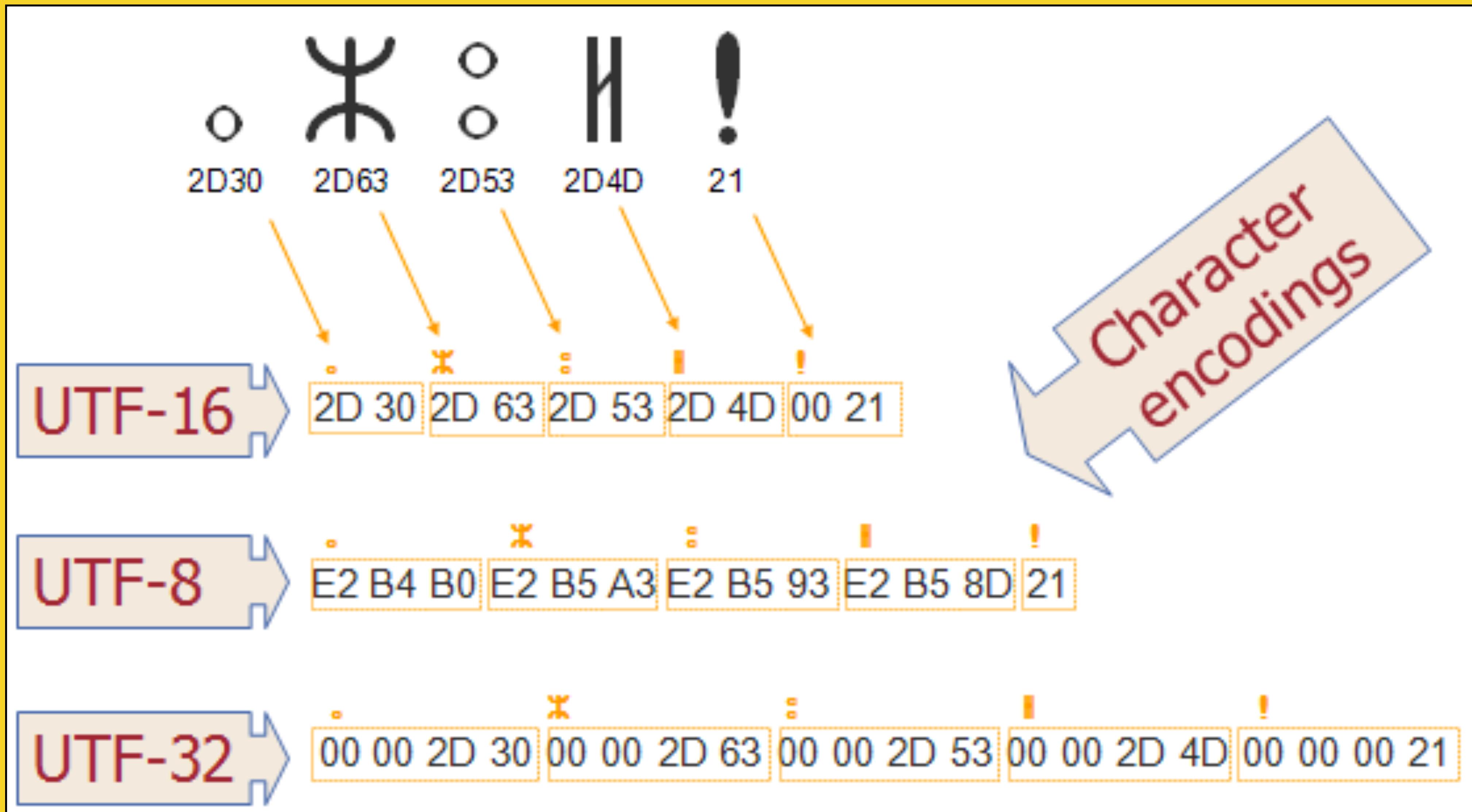
THE UNICODE

Unicode was a brave effort to create a single character set that included every reasonable writing system



CODEPOINTS U+

ENCODING



fonts fonts fonts fonts fonts fonts fonts
fonts fonts **fonts** fonts fonts fonts fonts
fonts fonts *fonts* fonts fonts fonts fonts
FONTS fonts fonts **FONTS** fonts fonts fonts
fonts fonts fonts fonts fonts fonts fonts
FONTS fonts fonts fonts fonts fonts fonts
fonts fonts fonts fonts fonts fonts fonts
FONTS fonts fonts fonts fonts fonts fonts
fonts fonts **FONTS** fonts fonts fonts fonts
FONTS fonts fonts fonts fonts fonts fonts

Font stripping





FontCreator 6 Professional Edition

File Edit View Insert Format Font Tools Window Help

Verajja Bold.ttf

Simple Glyph Index S0031 - Captions

R

Transform

Mirror Size Skew Bearings

Position Movement Rotation Scale

X position 1071 Y position 1493

On curve

Apply

(325,1603) R Point [contour index: 1 point index: 5] selected (1071, 1493) Editing glyph

This screenshot shows the FontCreator 6 Professional Edition interface. The main window displays a grid of glyphs for the font 'Verajja Bold.ttf'. A detailed view of the 'R' glyph is open in the center, showing its internal structure on a coordinate grid with axes for CapHeight, x-Height, and Baseline. A transform dialog box is overlaid on the grid, with 'Position' tab selected and coordinates X: 1071 and Y: 1493 entered. A 'Transform' button is at the bottom right. At the bottom of the main window, status text reads '(325,1603) R Point [contour index: 1 point index: 5] selected (1071, 1493) Editing glyph'.

NimbusSanL-Bold™ NimbusSanL-Bold.sfd (Compact UnicodeBmp)

S of 51 from NimbusSanL-Bold™

Font Information for NimbusSanL-Bold

PS Names General Ascent: 800 Descent: 200

Layers PS UID: 1000 Scale Outlines

PS Private PS/2 Em Size: 1000

OS/2 Italic Angle: 0 Guess

TTF Names Underline Position: -155 Height: 69

StyleSet Names Grid Fitting

TeX Comment: None

Size: Adobe Glyph List

FontLOG: Mark Classes

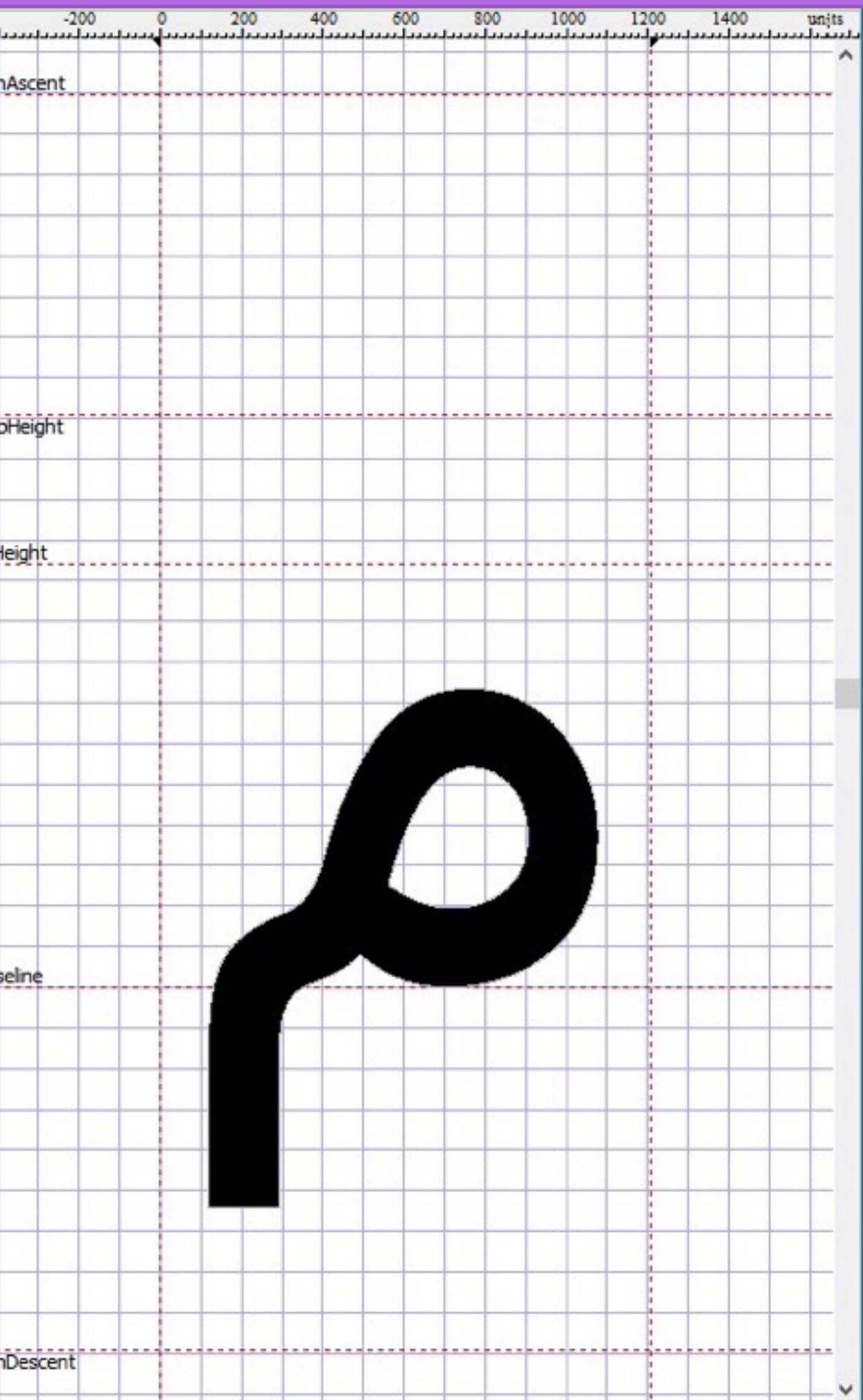
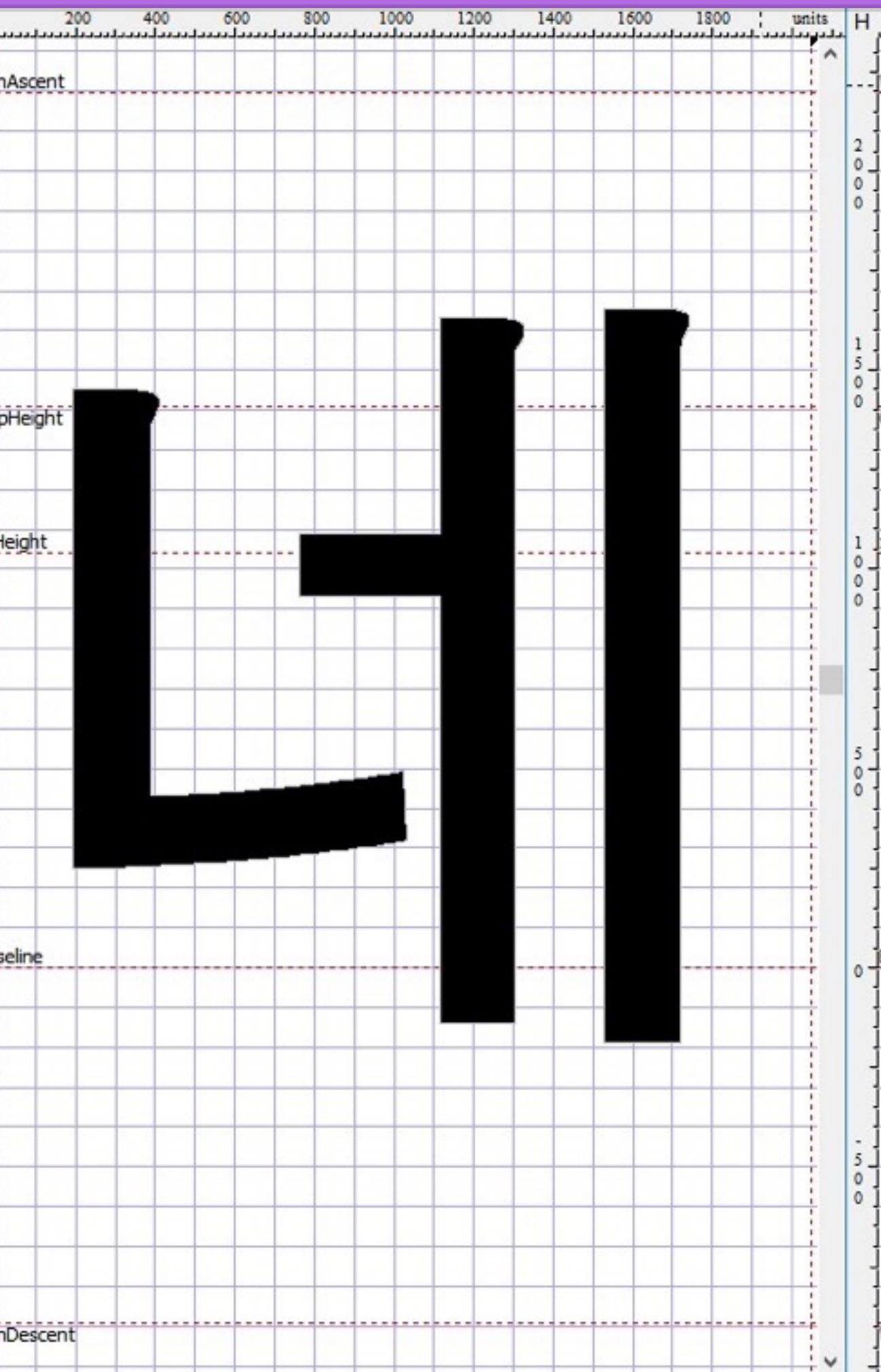
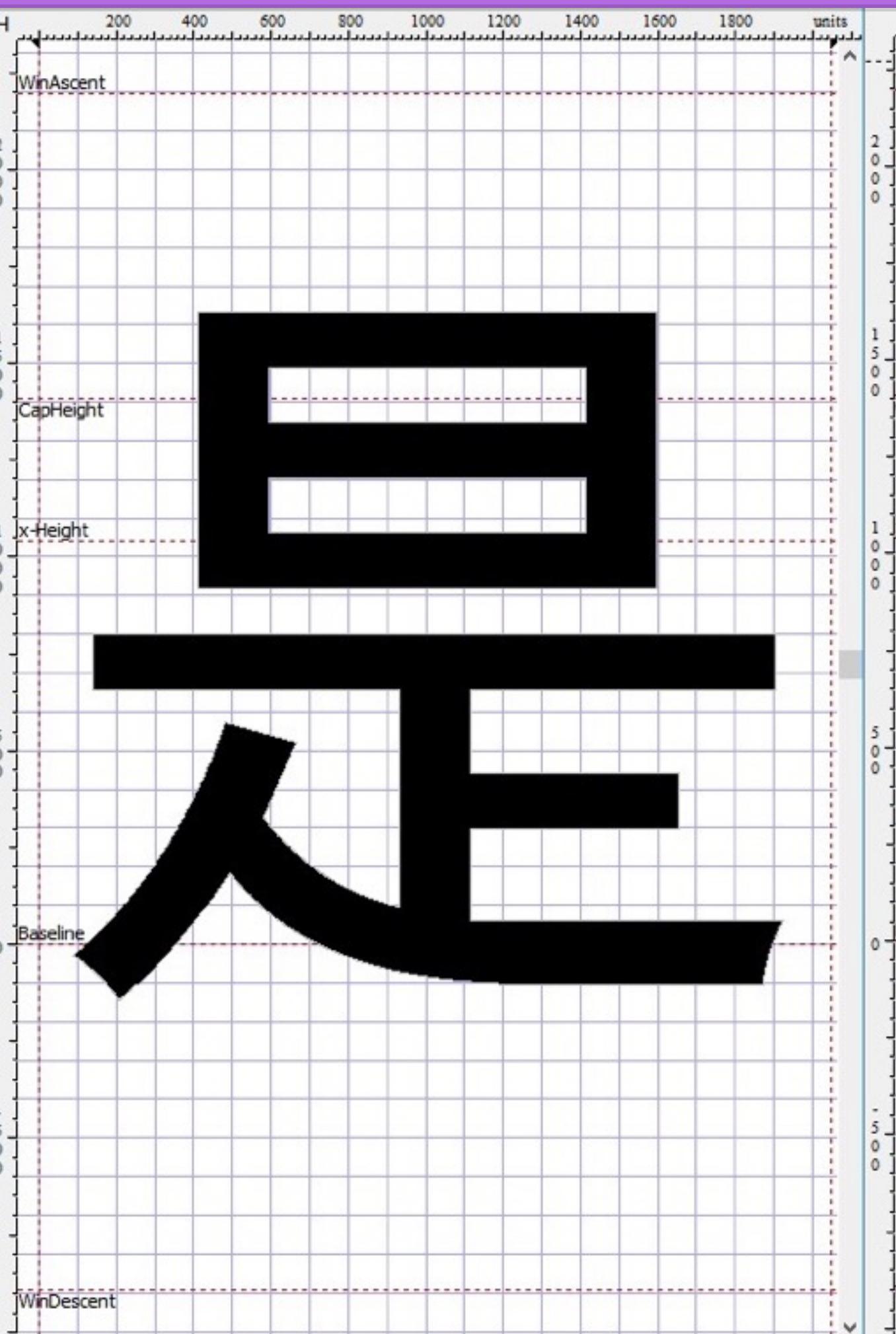
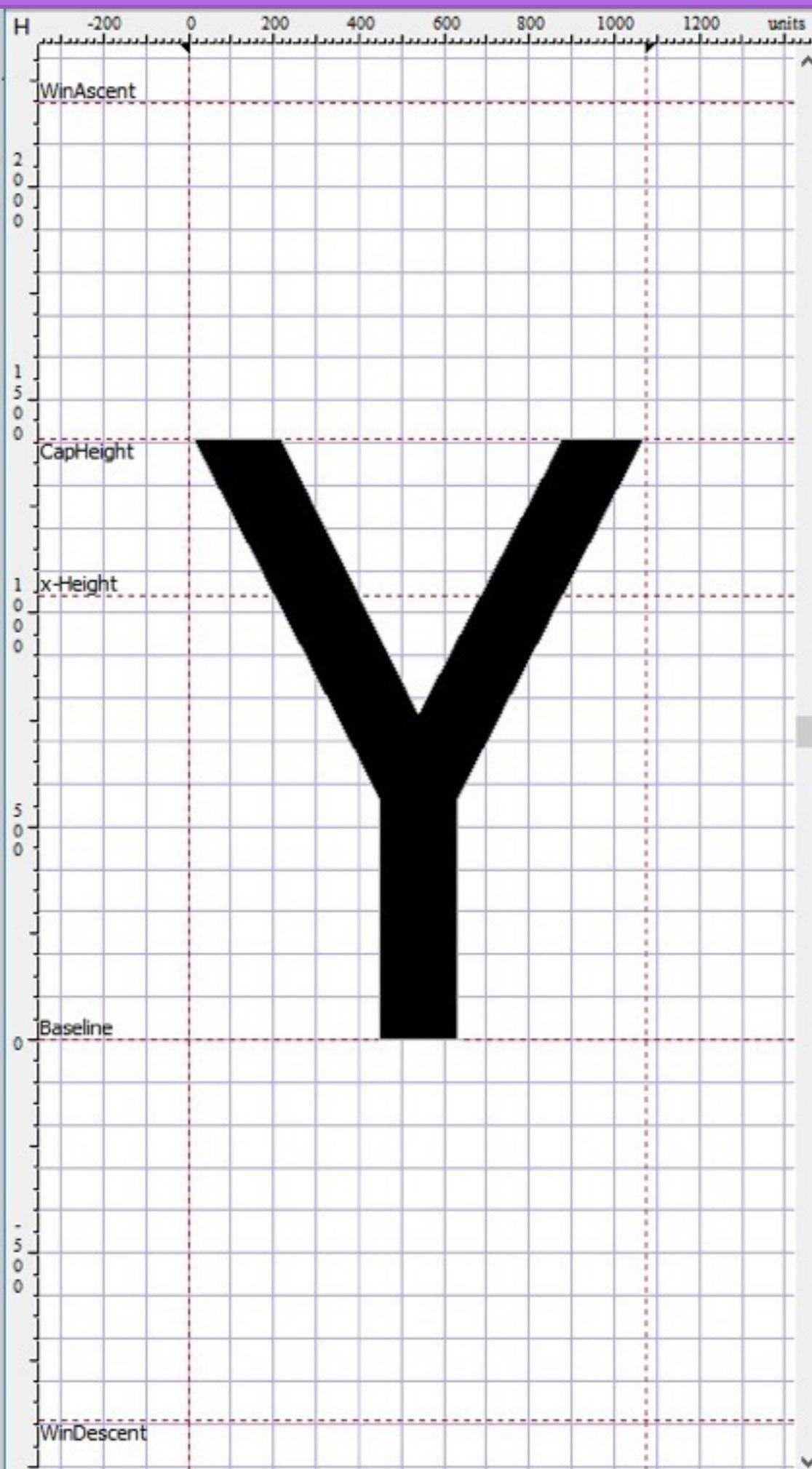
Interpretation:

Name List:

OK Cancel

V E Layer Guide Back Fore

The screenshot shows the FontForge interface editing the 'S' glyph from the 'NimbusSanL-Bold' font. The main workspace shows the 'S' outline with various handles and points. To the left is a palette with stroke styles (V, E, Layer, Guide, Back, Fore). On the right, a vertical bar lists characters: i, » a, Ó, é, ä, ě, á, é, ij, ij. A font information dialog box is open on the left, showing settings like Ascent (800), Descent (200), Em Size (1000), and Underline Position (-155).



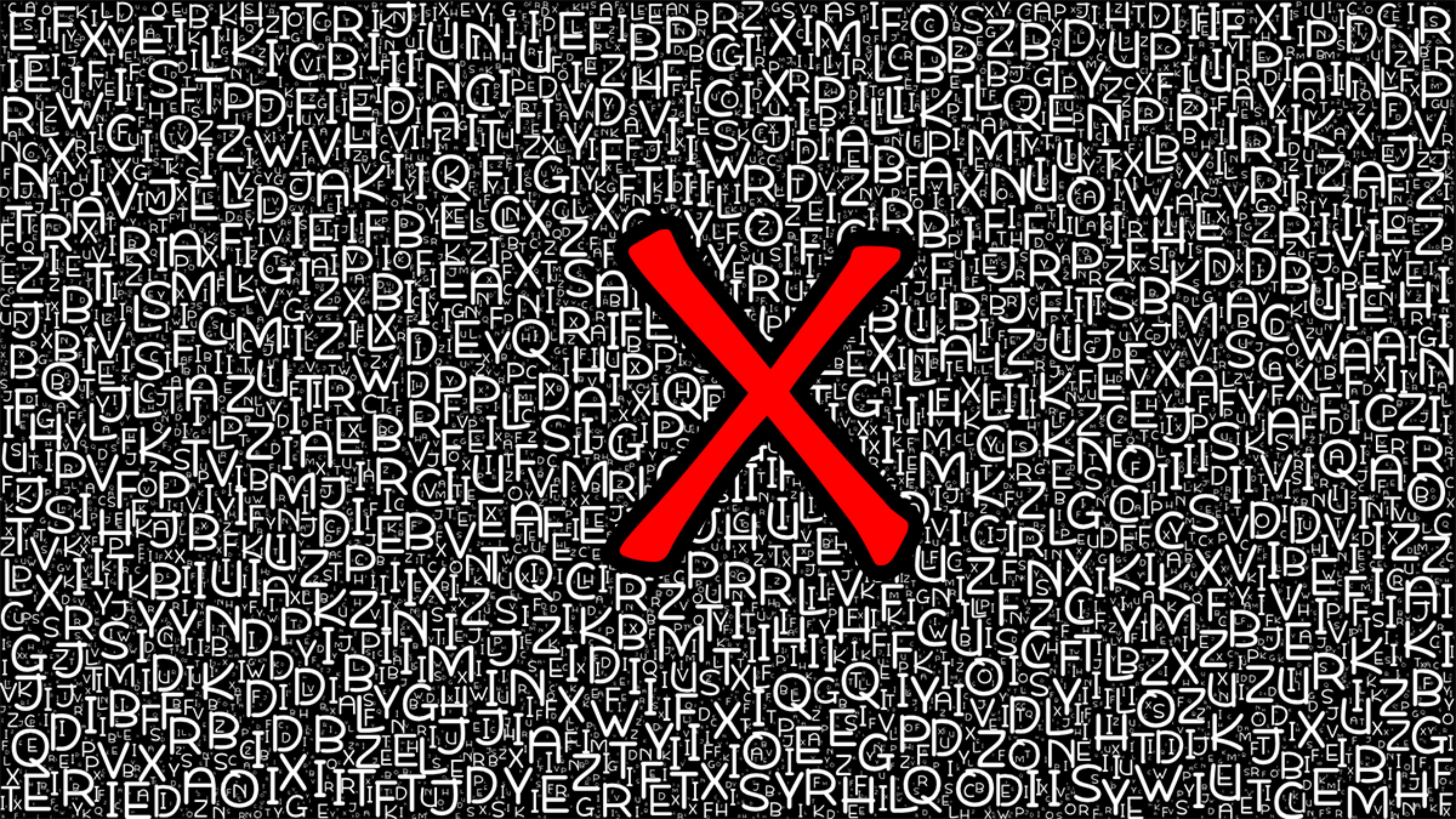
TERMS AND CONDITIONS

Legal documents









STRATEGY





ALL IN-GAME STRINGS KNOWN?

USER INPUT?

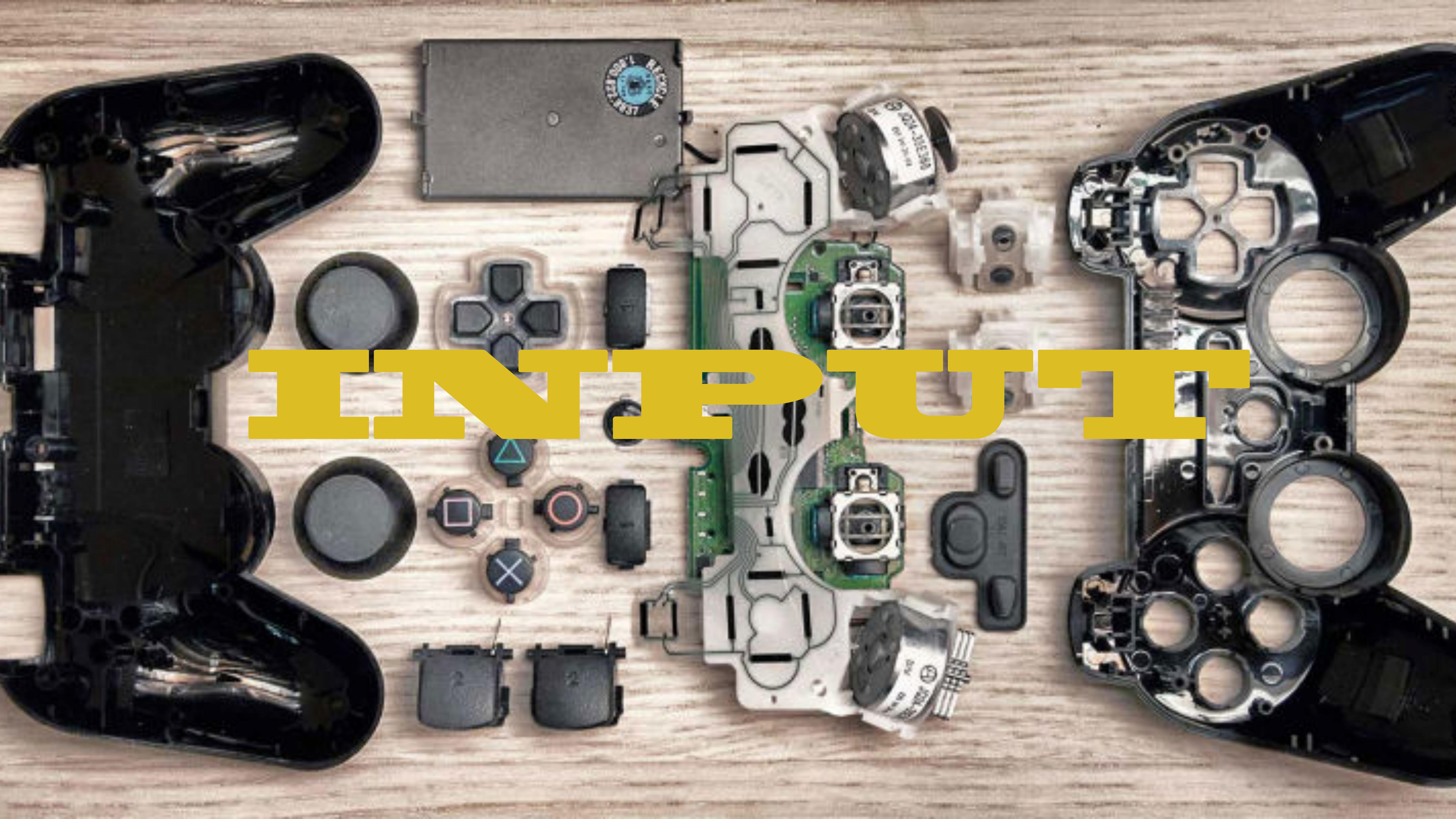
SOCIAL NETWORKS?

COMPLETE FONTS



STRIPPED FONTS



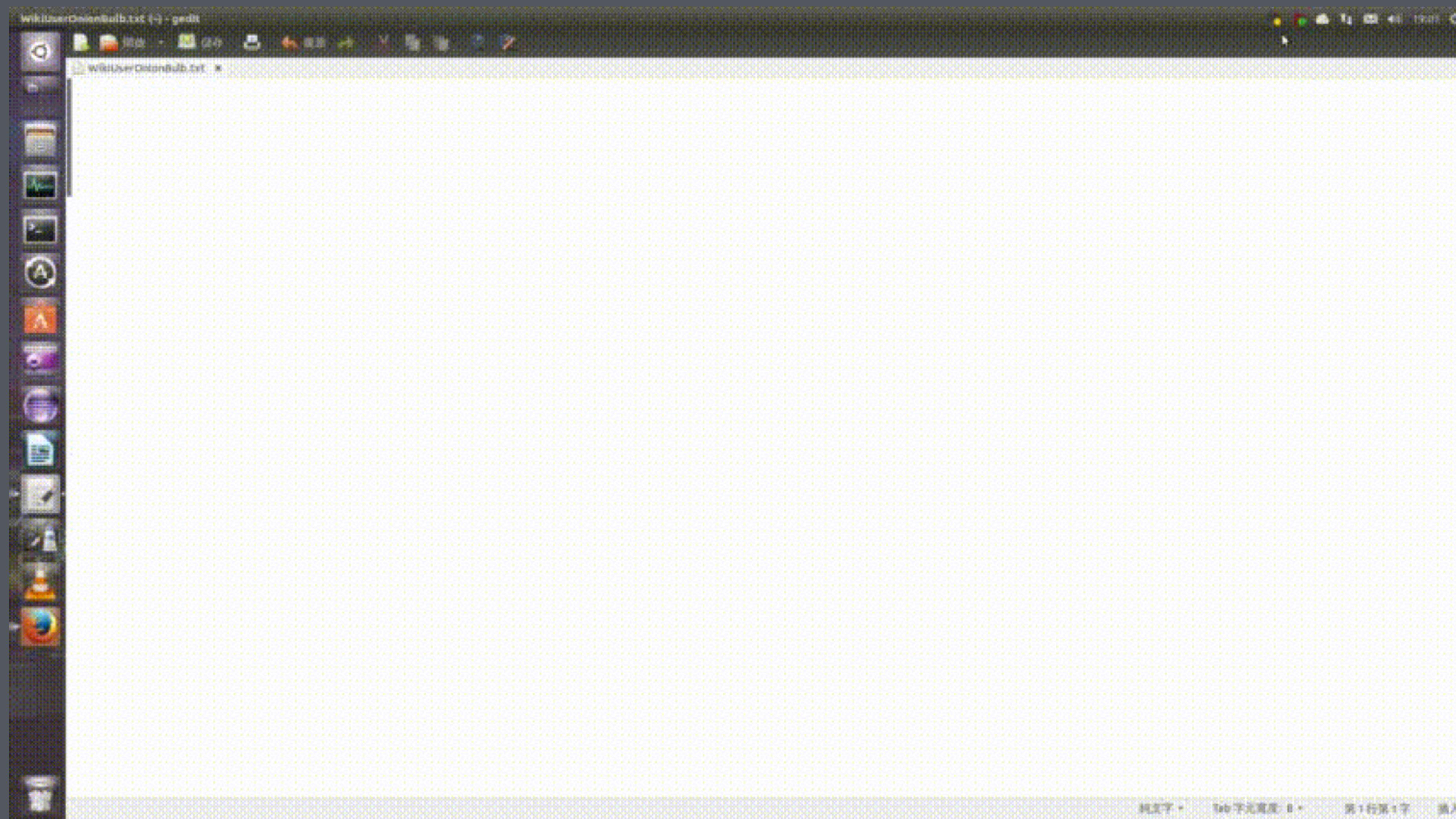


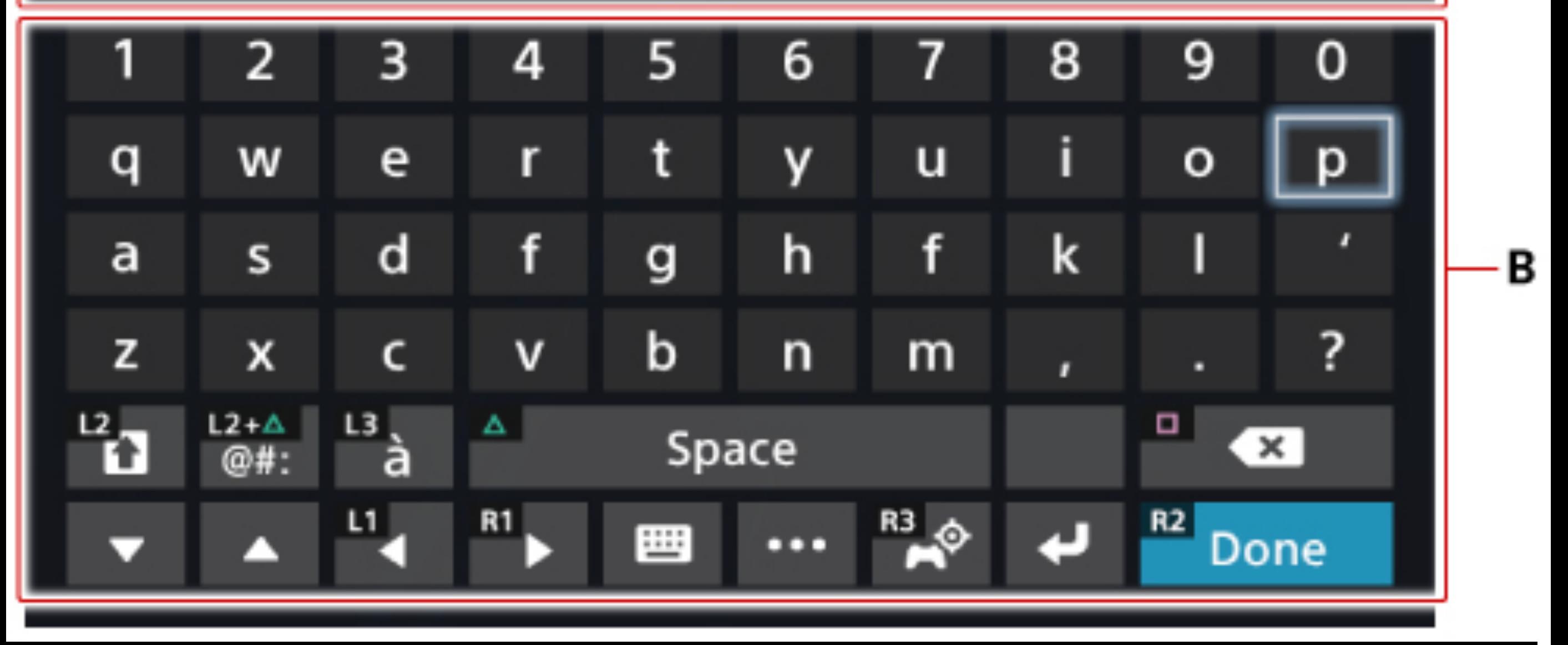
INTERUTT





IME





Give your Xbox a name

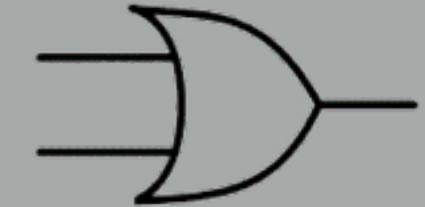
You'll need to restart your Xbox after changing its name.







Dynamic Font Rendering



TEXTMESH PRO!

The Ultimate Text Solution for Unity

SYSTEM FONTS

Risks:

OS UPDATES

FONTS CHANGED BY THE USER (ANDROID)

TESTING IN A WIDER RANGE OF DEVICES











SENRGIF.COM

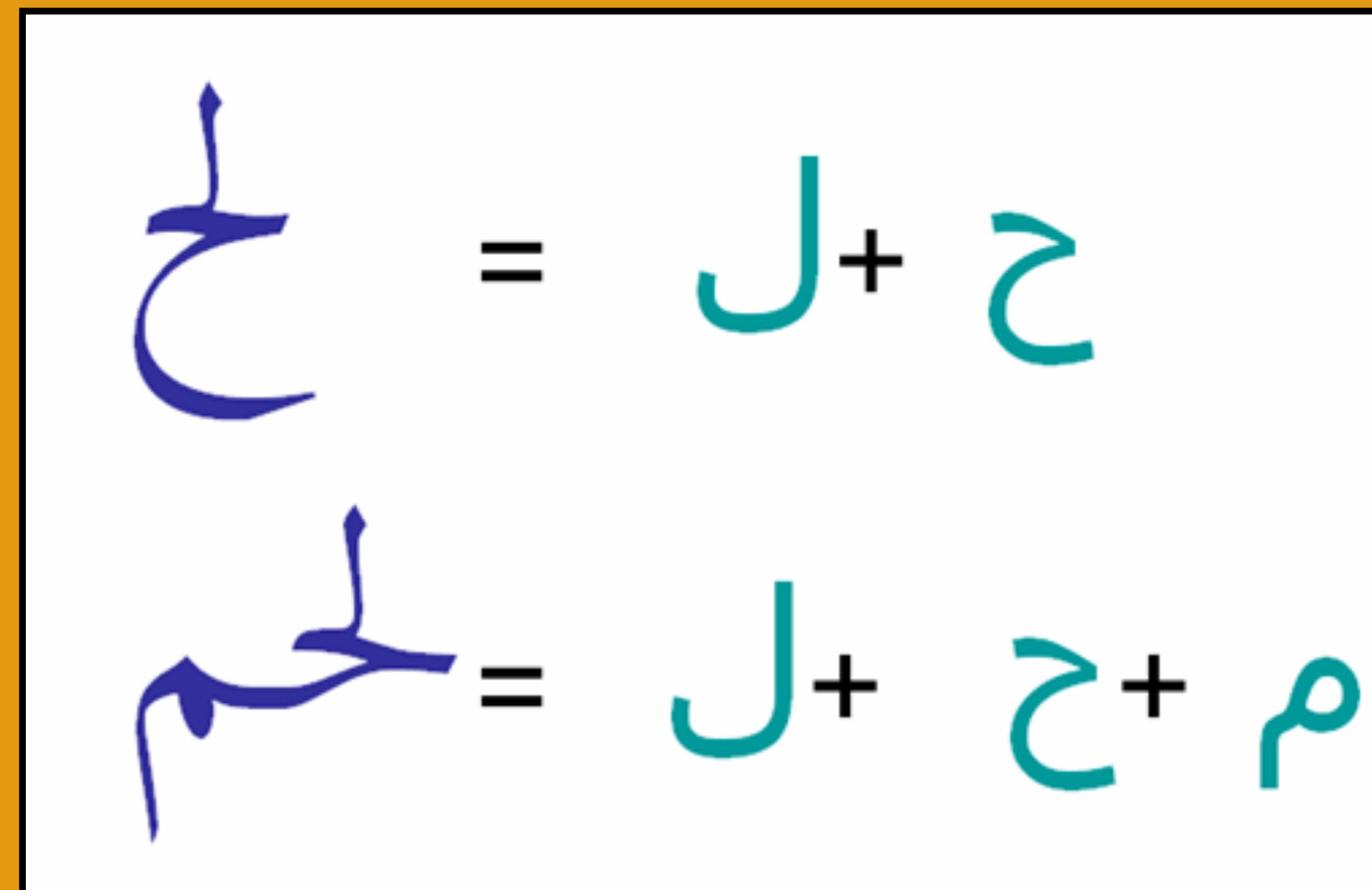




Cursive script

ت ت ت
ك ك ك ل
ه ه ه ه ه

Ligatures



Bidirectional

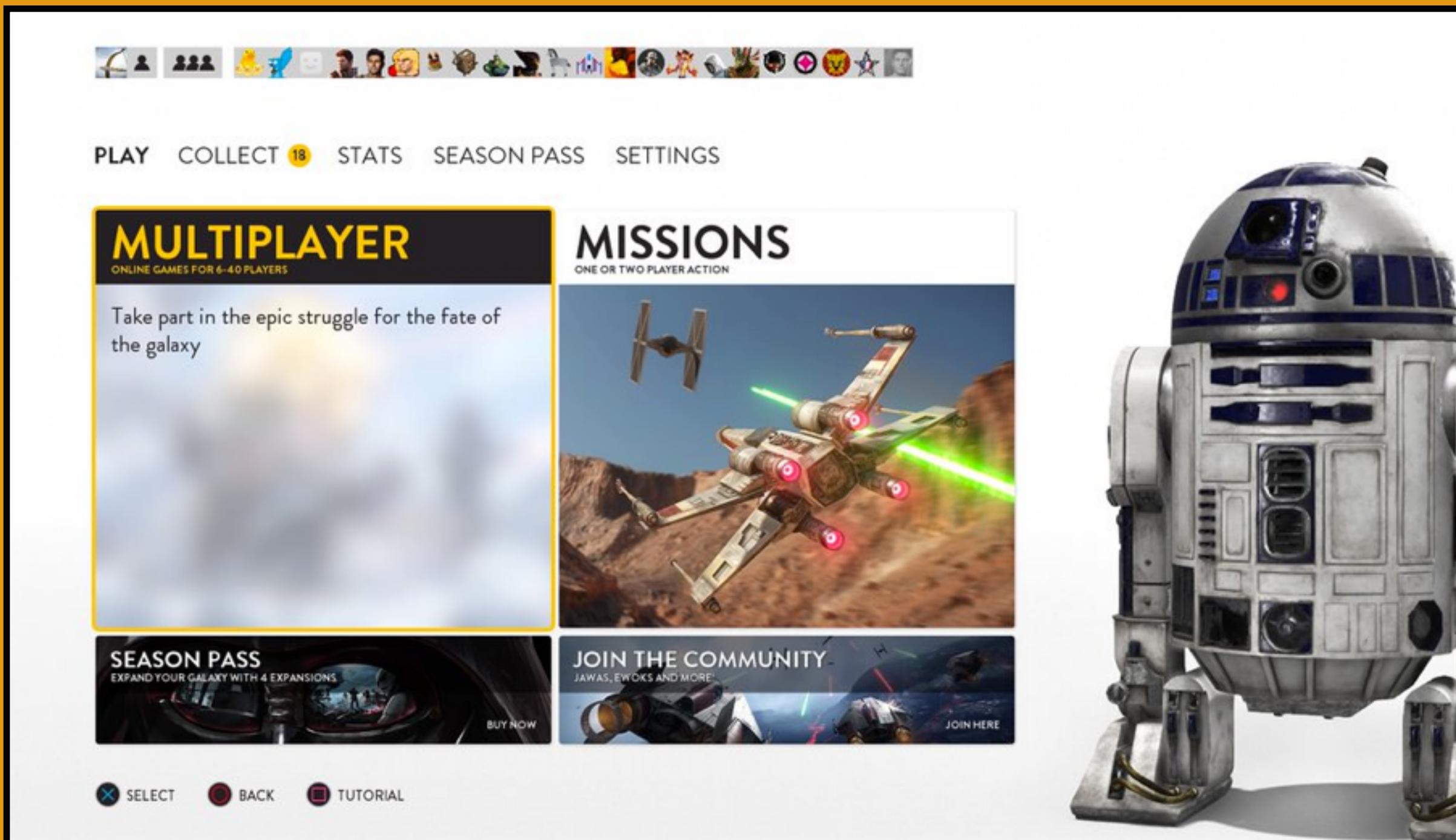
- U+202A: LEFT-TO-RIGHT EMBEDDING
- U+202B: RIGHT-TO-LEFT EMBEDDING
- U+202D: LEFT-TO-RIGHT OVERRIDE
- U+202E: RIGHT-TO-LEFT OVERRIDE
- U+202C: POP DIRECTIONAL FORMATTING
- U+200E: LEFT-TO-RIGHT MARK
- U+200F: RIGHT-TO-LEFT MARK

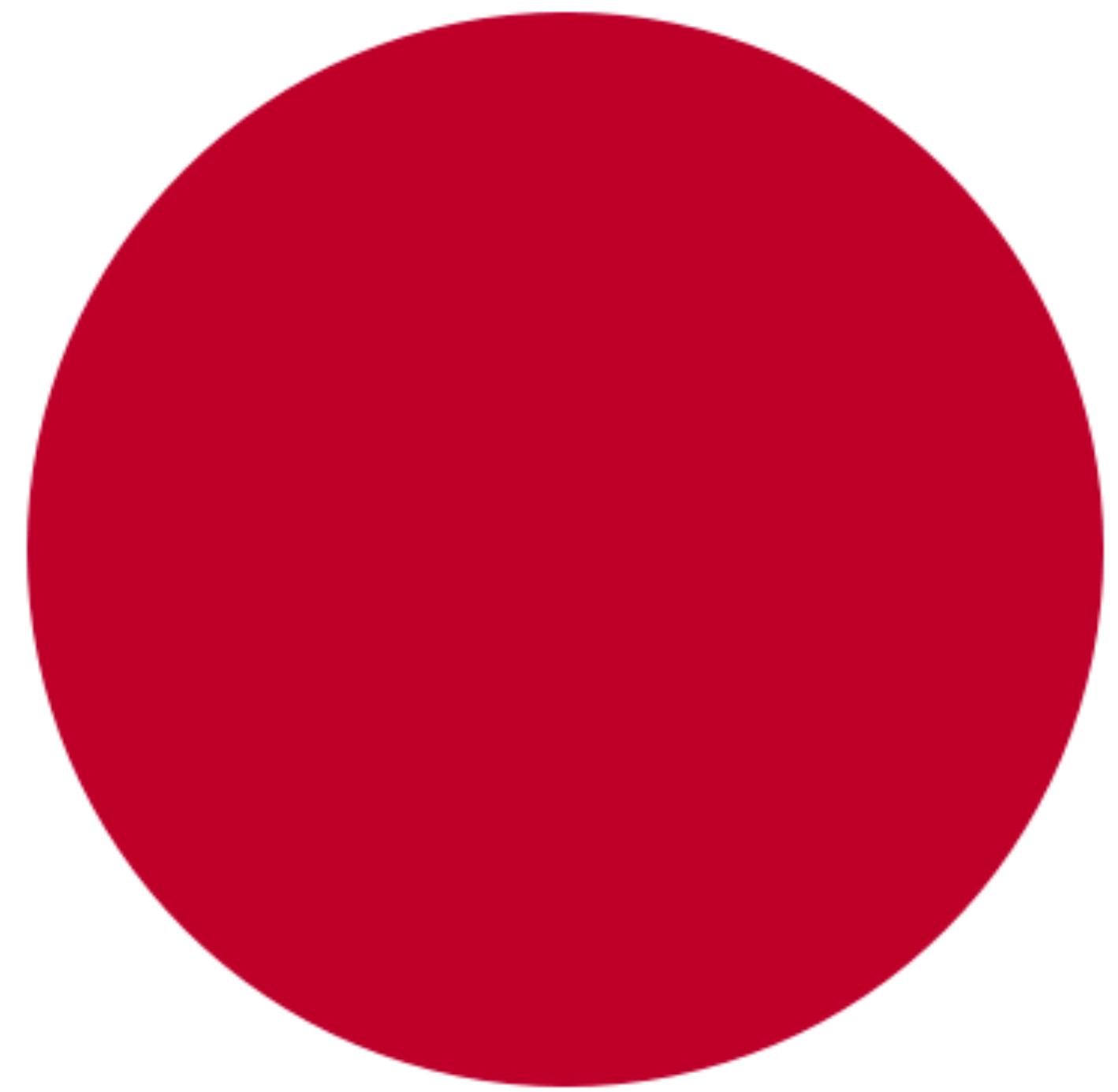
الأمير Charles و الأميرة Camilla

Camilla Charles والأميرة الأمير الأمير



UI Design



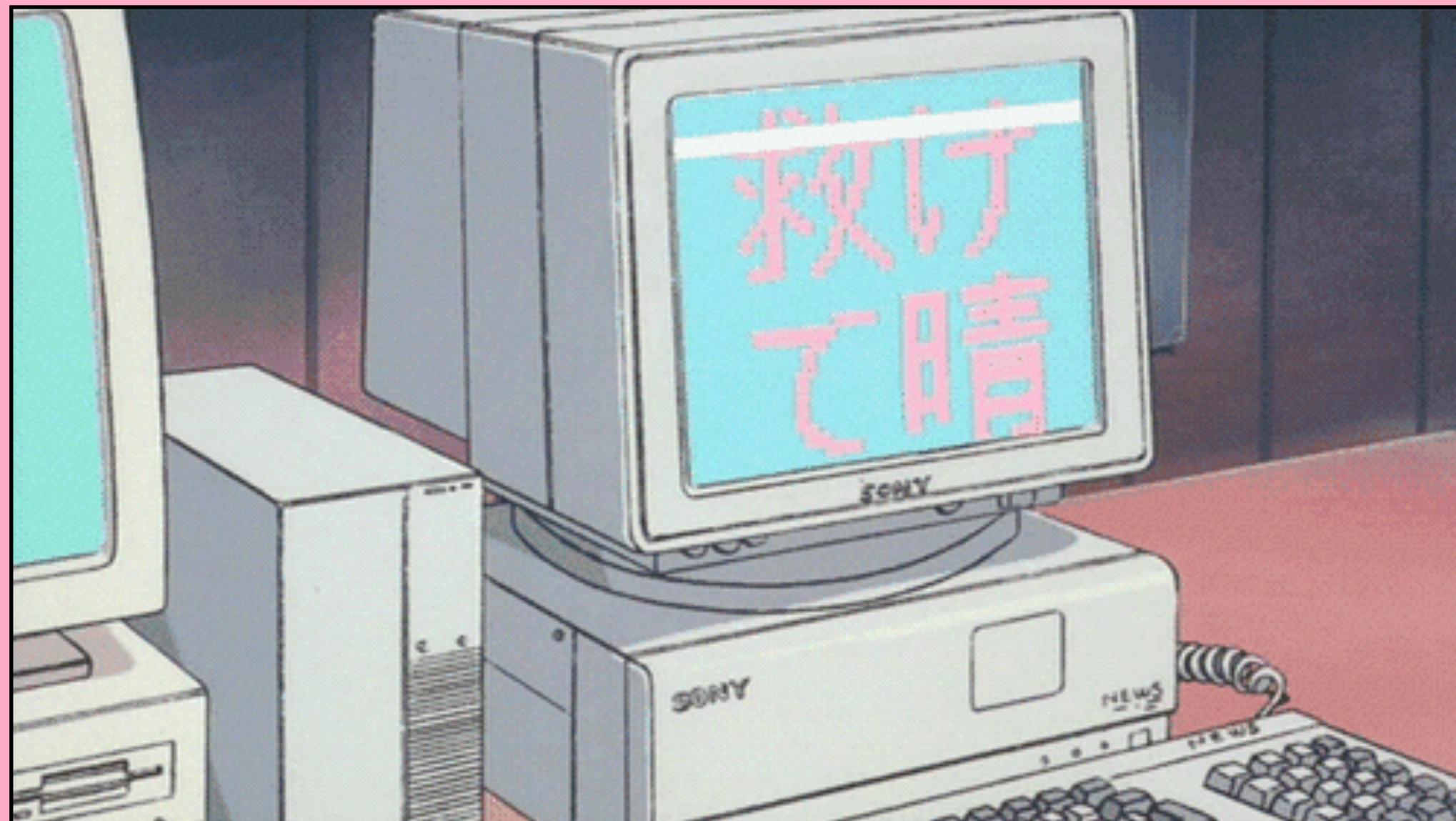


SCRIPTS

	A	I	U	E	O
A	あ	い	う	え	お
K	か	き	く	け	こ
S	さ	し	す	せ	そ
T	た	ち	つ	て	と
N	な	に	ぬ	ね	の
H	ば	ひ	ふ	へ	ほ
M	ま	み	む	め	も
Y	や		ゆ		よ
R	ら	り	る	れ	ろ
W	わ				を
7(n)	ん				
G	が	ぎ	ぐ	げ	ご
Z	ざ	じ	ず	ぜ	ぞ
D	だ	ぢ	づ	で	ど
B	ば	び	ぶ	べ	ぼ
P	ぱ	ぴ	ぷ	ペ	ぽ

SCRIPT	CHARS
KANJI	COULD BE > 50,000 USUALLY < 10,000
HIRAGANA	46
KATAKANA	46

	A	I	U	E	O
A	ア	イ	ウ	エ	オ
K	カ	キ	ク	ケ	コ
S	サ	シ	ス	セ	ソ
T	タ	チ	ツ	テ	ト
N	ナ	ニ	ヌ	ネ	ノ
H	ハ	ヒ	フ	ヘ	ホ
M	マ	ミ	ム	メ	モ
Y	ヤ	ユ	ヨ	ヨ	ヨ
R	ラ	リ	ル	レ	ロ
W	ワ				ヲ
7(n)	ン				
G	ガ	ギ	グ	ゲ	ゴ
Z	ザ	ジ	ズ	ゼ	ゾ
D	ダ	ヂ	ヅ	デ	ド
B	バ	ビ	ブ	ベ	ボ
P	パ	ピ	ブ	ペ	ボ



Text is legible

Avoid styled fonts (bold,
italicized, etc)





义
厂贝书、亲
关鸟
已
涌
通
运
产
立
复
杂
阳
画
觉
马
选
开
仁
农
进
面
乡
对
飞
进
对
面
对
进
simplified
帮
一
云
龙
图

廠貝關
義道
運飛湧
愛國鄉
開選陽
漢佇農
龍畫覺
雲圖幫
親兒鳥
產轉書
筆

進
麵對
國鄉
對
進
漢
龍
雲
圖
幫
親
兒
鳥
產
轉
書
筆

tradi^{tion}al

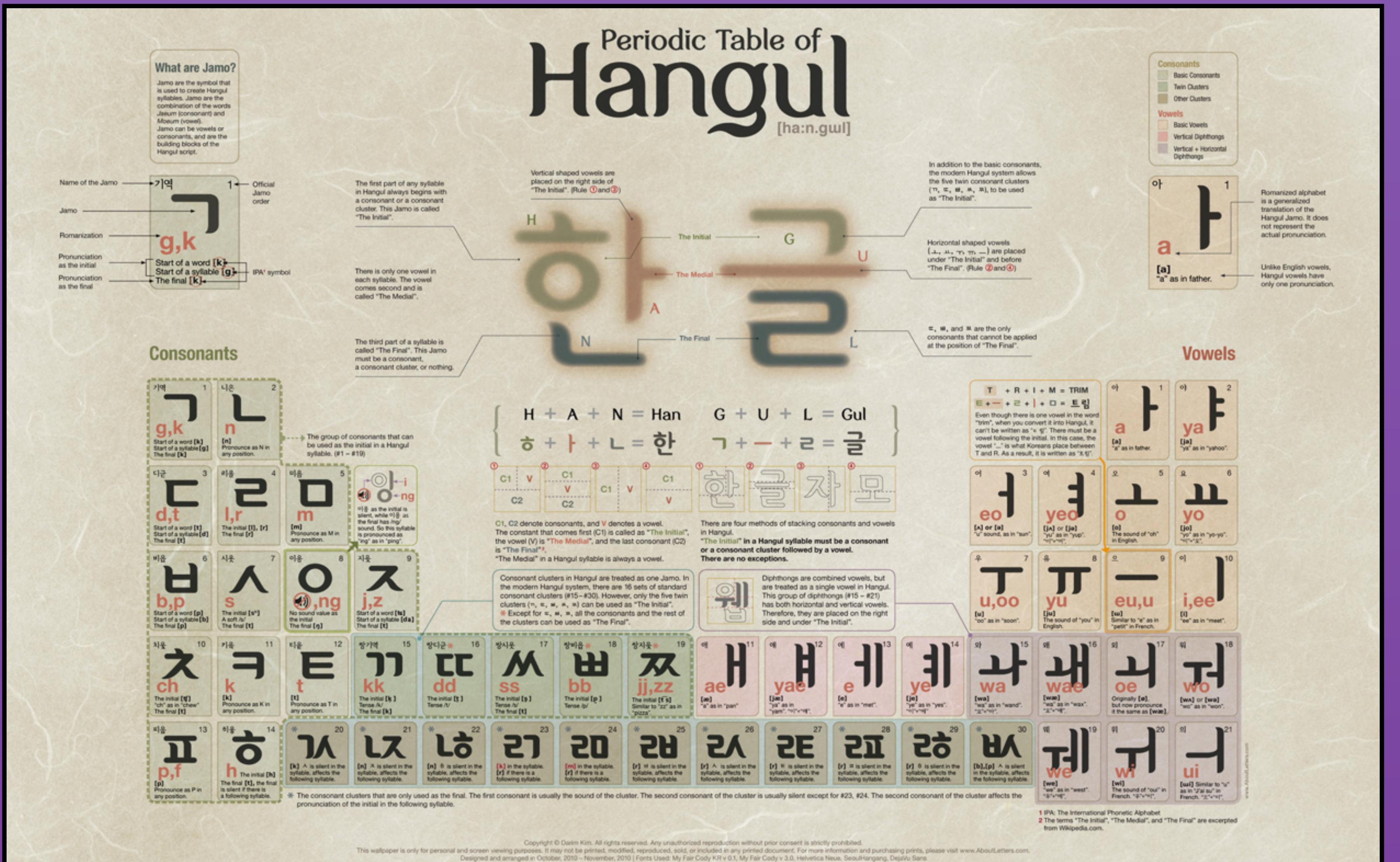


LANGUAGE	CHARS
TRADITIONAL CHINESE	COULD BE $> 85,000$ USUALLY $< 10,000$
SIMPLIFIED CHINESE	$> 8,000$



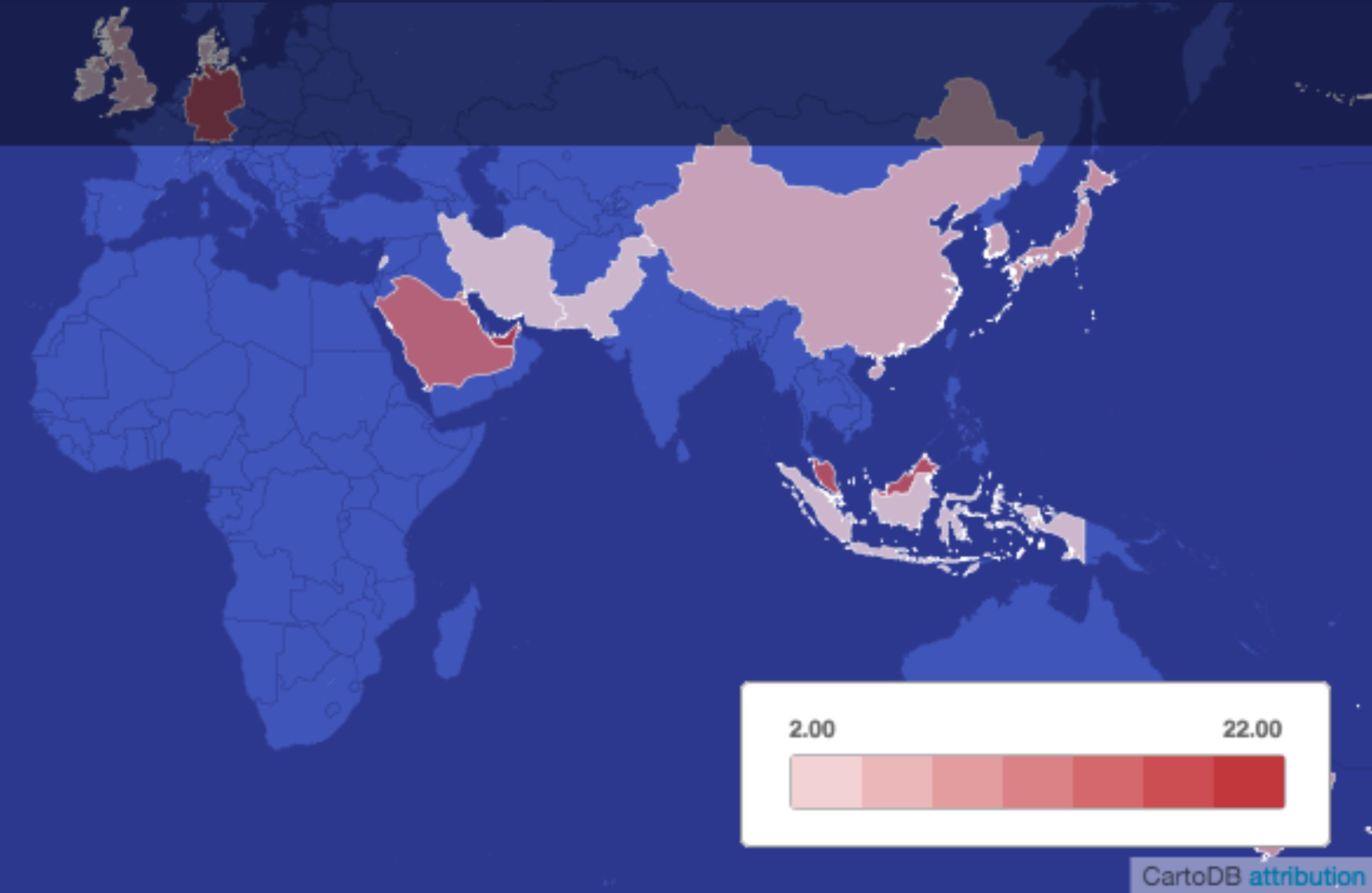
HANGUL

Thousands. 24 consonants and vowels, which are combined to form glyphs.
Fonts can have up to 11.000 glyphs.



Banned video games

Reference



<https://goo.gl/QZb6kA>



T.Hanks