

The Ubuntu font family...

ubuntu

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ubuntu
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i manjo ned

Bruno Maag at the Ubuntu Developer Summit
12 May 2010

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... is a huge piece of work:

Regular, Bold, Italic, Bold Italic

Light, Medium plus their Italics

Mono in Regular, Bold, Italic, Bold Italic

Condensed Regular

Latin A+B Extended, Greek Polytonic, Cyrillic Extended

Arabic, Hebrew

Fully hinted

abcdegh
ilnorstu.
CEHO 14

60pt

Canonical
ubuntu
Encoding
Character set

36pt

One beat aussenstelle.
guitar Chance end tons
censor centaur 4.1 geben
can not do this ausser.
Hero China sicherstellen
Error single setting ant
nieselregen Organ dagger
dalton sich nano 11 House
Change Echtheit bestaunt.

18pt

One beat aussenstelle. guitar Chance end tons
censor centaur 4.1 geben can not do this ausser.
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10pt

A
C
X
D
Ebng

A
C
X
D
Ebng

A
C
X
D
Ebng

condensed width
distinctive serifs
higher contrast
acti
eosl

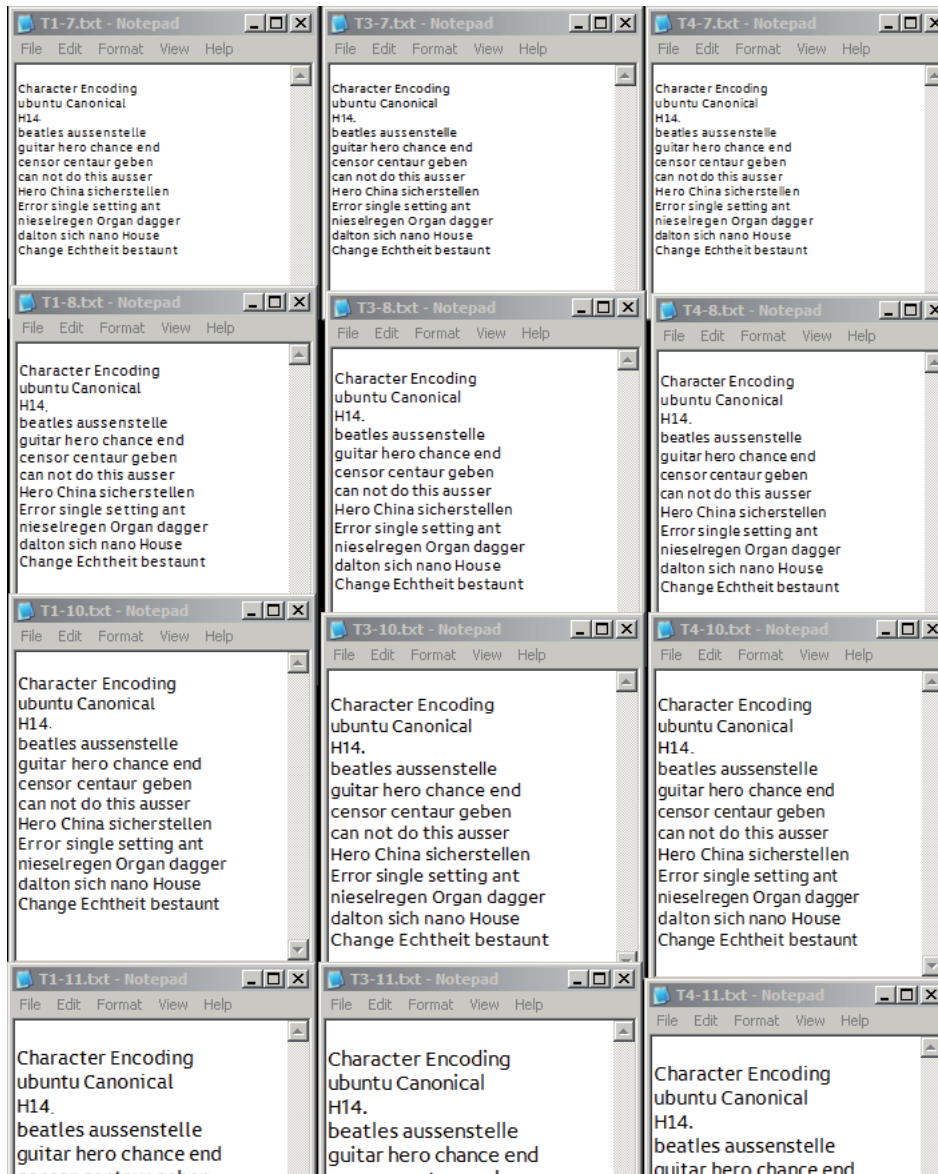
wider proportions
simplified design
circular shapes
angular ascenders
acti
eosl

angular terminals
square and open shapes
even character width
acti
eosl

Version T1

Version T3

Version T4

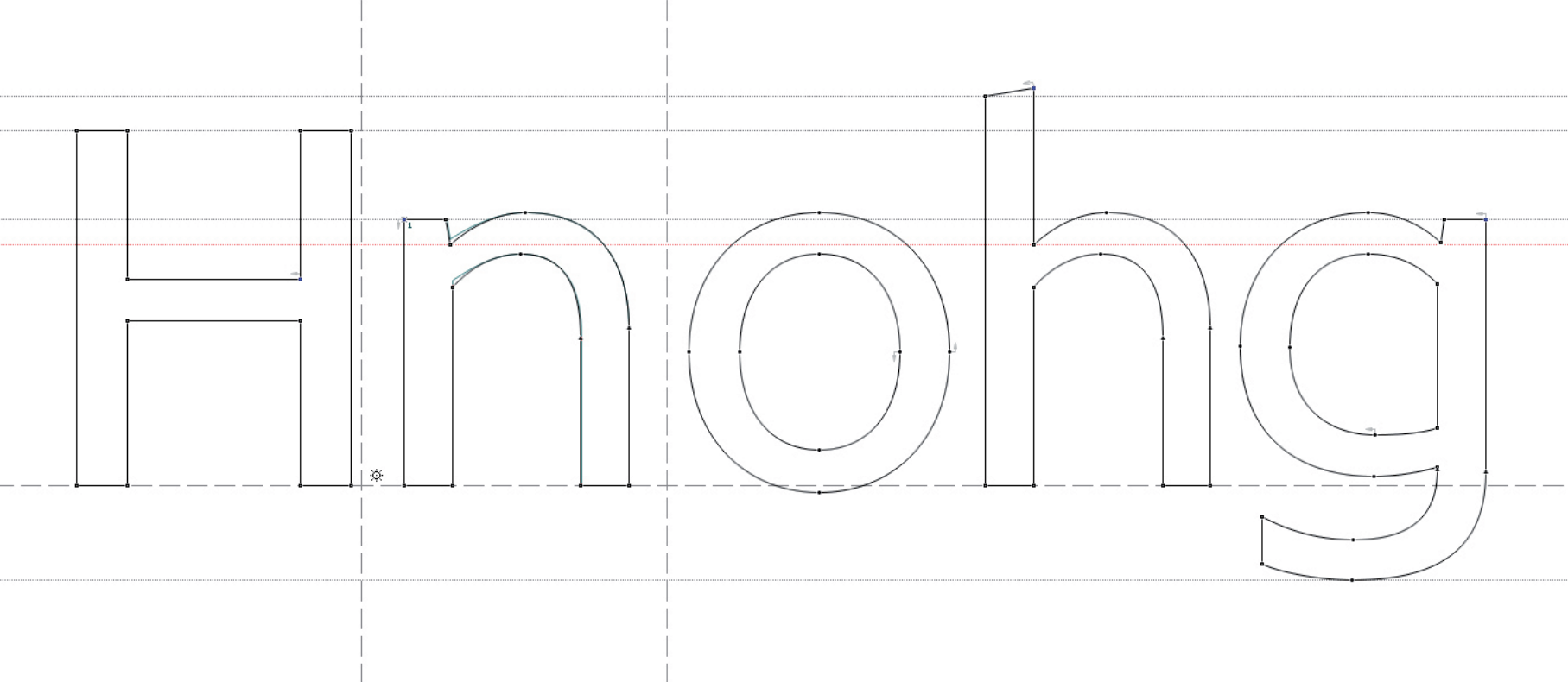




bl Top level ClassCleaner

n from UbuntuT3_V3

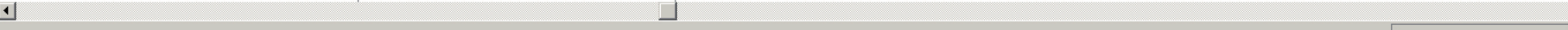
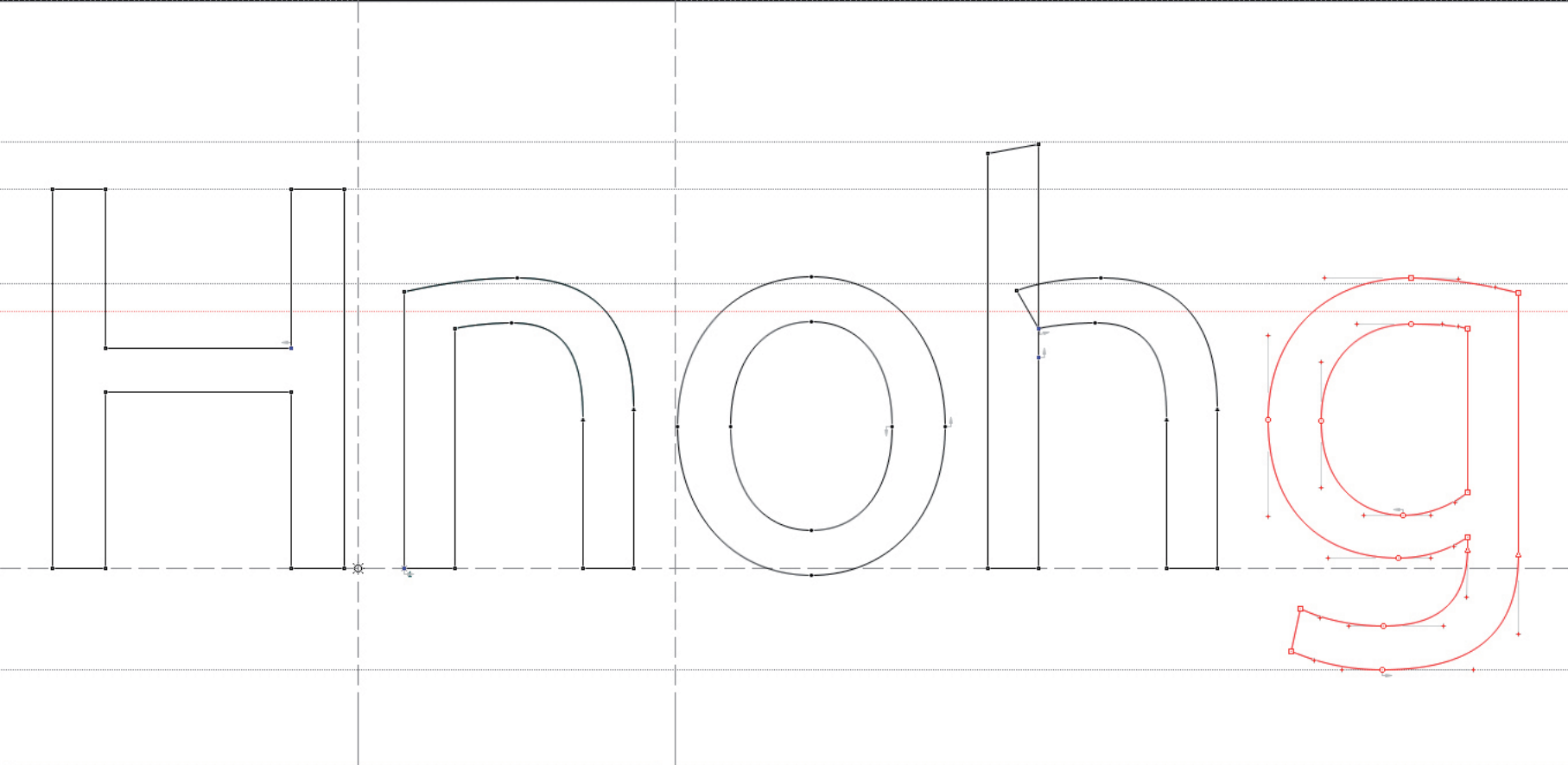
0	x	2390	2	2.8	65
8	y	357	2	45.0	0

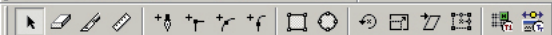
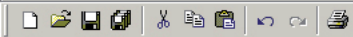




Top level ClassCleaner

x 2237 y 755 z -1853.0 0 1853.0 180.0 63 18



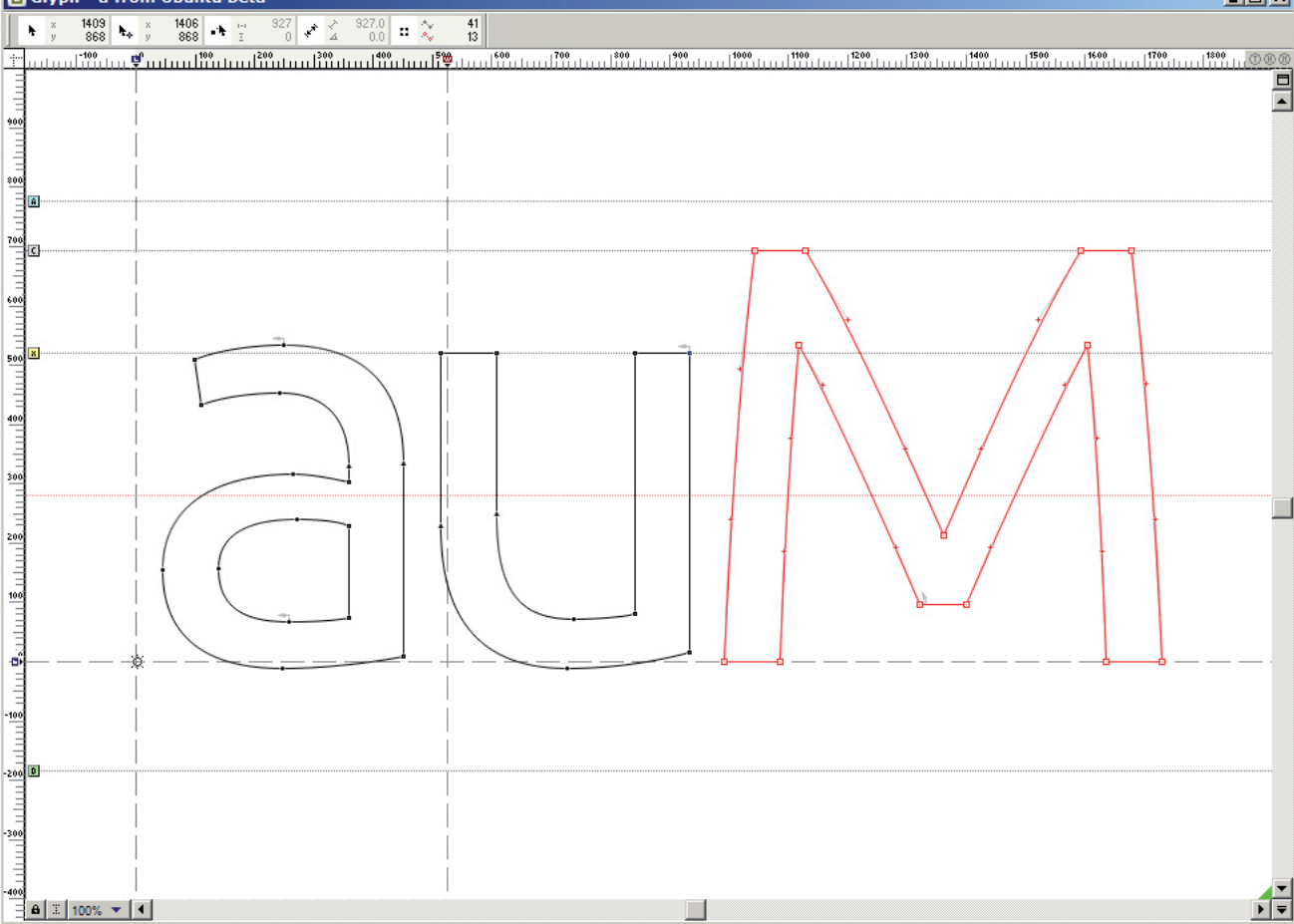


Curve tool Top level ClassCleaner

Font - Ubuntu Beta [...\FontFiles]

Glyph - a from Ubuntu Beta

notdef	.null	CR	glyph3	glyph4	glyph5	gly
oe						
parenright	asterisk	plus	comma	hyphen	period	z
)	*	+	,	-	.	
R	S	T	U	V	W	
R	S	T	U	V	W	
bracketleft	bar	bracketright	asciitilde	glyph127	Euro	gly
{		}	~		€	
currency	yen	brokenbar	section	dieresis	copyright	ord
¤	¥	¦	§	¨	©	
acute	icircumflex	idieresis	Eth	Ntilde	Ograve	Os
í	î	ï	Ð	Ñ	Ò	
odieresis	divide	oslash	ugrave	uacute	ucircumflex	udi
ö	÷	ø	ù	ú	û	
gbreve	Gdotaccent	gdotaccent	Gcircumflex	Gcircumflex	Hcircumflex	
ğ	Ğ	ğ	Ç	ç	Ĥ	
ncaron	Ncaron	ncaron	npostrophe	npostrophe	Eng	
ŋ	Ñ	ñ	Ŋ	h	Ŋ	
Uogonek	uogonek	Wcircumflex	Wcircumflex	Ycircumflex	ycircumflex	Zs
Ů	ů	Ű	ű	Ŷ	ŷ	
eighthsup	ninesup	scroinf	scroinf	twoinf	twoinf	threeinf
8	9	0	1	2	3	
summa	uni2126	minuz	uni2215	uni2219	radical	inf
Σ	Ω	-	/	·	√	
two sups	three sups	four sups	five sups	six sups	seven sup	eigh
2	3	4	5	6	7	
glyph533	glyph534	glyph535	glyph536	glyph537	glyph538	gly



exclam	quotedbl	numbersign	dollar
!	"	#	\$
J	K	L	M
J	K	L	M
s	t	u	v
s	t	u	v
oe	glyph157	glyph158	Ydier
œ			ÿ
Aring	AE	Ccedilla	Egrave
Å	Æ	Ç	È
icircumflex	idieresis	eth	ntilde
î	ï	ð	ñ
etodotaccent	Eogonek	ogonek	Ecaro
ë	Ę	ę	Ě
Icaron	Ldot	Idot	Lfita
ḷ	ḷ	ḷ	ḷ
Umacron	umacron	Ubreve	ubreve
Ū	ū	Ů	ů
Ygrave	ygrave	fraction	zeros
ÿ	ÿ	/	o
twoninth	four ninth	five ninth	seven
2/9	4/9	5/9	7/9
four.alt	five.alt	six.alt	seven
p.commaaccent	caron.alt	commaaccent	reco
uni0197	uni0198	uni0199	uni01
†	‡	‡	‡

ABC
B B C C D
Z Z S S T T Ž Ž
P Ń Ā Ą Ć ć

h

Αα² Ββ⁷ Γγ[✓] Δδ[✓] Εε[✓] Ζζ^{could use 2} Ηη^{could be η}

Θθ^{could be} Ιι[✓] Κκ[✓] Λλ[✓] Μμ[✓] Νν[✓] Ξξ^{→ j·γ}

Οο[✓] Ππ[✓] Ρρ[✓] Σσ[✓] Ττ[✓] Υυ[✓] Φφ^{could be shift}

Χχ^{alt} Ψψ^{equal} Ωω[✓]

αδορσϋβθφω ες ηιμ υ

γνχλ ζξ κ π τ ψ

ΑΔΛ ΓΕΞΗΙΠΤ ΘΟΦΩ

ΚΜΝΖΣΧ ΒΡ Υ Ψ

βιοπάλη δέντρο

μήνυμα καικια όμως

εξαυλωση εξώστης

Unicode

ζηχ Sing

Rule Sin

Handwritten red symbols: λ, ρ, ρ, λ

DEF
IOPQ
XYZ
defg
rstu

is Lore

um is simply
etting indus
try's standa
nen an unk
scrambled i
ias survived
eap into ele
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is with the r
ng Lorem Ip
with desk
ageMaker it
t is a long e
jistracted b
nen looking
psum is the
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i. Many des
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text, and a
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and the like). Lo
the printing and
has been the inc
since the 1500s
a galley of type
specimen book
different form
feels is the mo

AHABHCHDHEHFHGHIIHJHKHLHMHNHOHPHQHRHSHTHUHVHWHXHYHZH
AOBOCODOEFOGOGOHOIOJOKOLOMONOPOQOROSOTOUOVOWOXOYOZO

oaobocodoeofogohoiojokolonopoqoroosotouovowoxoyozoßo
nanbncndnenfngnhninjnknlnmnonpnqnrsntnvnwnxnynznßn

H!H?H&H(H)H*H-H,H.H/H;H:H@H[H\H]H^H{H|H}H¡H~H†H‡H•H·H¶H§H®H©H
H™H°H¿HiH«H»H‹H›H...H-H-H—H_H“H”H’H’H,,H,H
O!O?O&O(O)O*O-O,O.O/O;O:O@O[O\O]O^O{O|O}O¡O~O†O‡O•O·O¶O§O®O©O
O™O°O¿O¡O«O»O‹O›O...O-O-O—O_o“o”o’o’o,,o,o

n!n?n&n(n)n*n-n,n.n/n;n:n@n[n\n]n^n{n|n}n¡n~n†n‡n•n·n¶n§n®n©n™n¿n;n«n»n
n‹n›n...n-n-n—n_n“n”n’n’n,,n,n
o!o?o&o(o)o*o-o,o.o/o;O:O@O[O\O]O^O{O|O}O¡O~O†O‡O•O·O¶O§O®O©O™O¿O¡O«O»O‹O›
O
O...O-O-O—O_o“o”o’o’o,,o,o

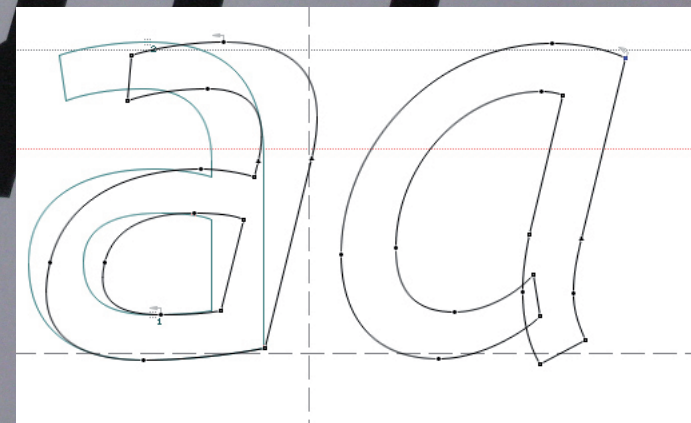
0102030405060708090-0\$0€0¥0£0¢0f0#0¤0°0%0‰0+0-0÷0×0=0±0<0>0'0"0Nº0
µ0
0102030405060708090-0\$0€0¥0£0¢0f0#0¤0°0%0‰0+0-0÷0×0=0±0<0>0'0"0Nº0µ
0

g h i j k l m

ab

a a a a b c d

n o p q r t



n n n n n n n n n n n n n n n n

The screenshot displays the FontLab Studio interface. At the top, the menu bar includes File, Edit, View, Contour, Glyph, Tools, Window, and Help. Below the menu is a toolbar with various editing tools. The main workspace is divided into several sections:

- Font Properties:** Shows the font name 'Font - Ubuntu Beta Bold' and its file path.
- Character Map:** A grid showing the mapping of glyphs to characters. The 'A' and 'B' characters are highlighted in blue.
- Preview/Metrics:** A window showing the font's metrics for the sequence 'nunb nunt n'. The 'n' is highlighted in blue. The metrics table below shows values for various glyphs.
- Metrics Table:**

	n	n	u	n	b	n	n	t	n	u	n
N	589	589	589	604	589	589	589	444	589	589	589
*	70	65	70	70	65	70	65	70	65	70	70
h	65	70	65	45	65	70	65	30	65	70	65
- Right Panel:** A list of glyph pairs and their kerning values. The 'A O' pair is highlighted in blue.

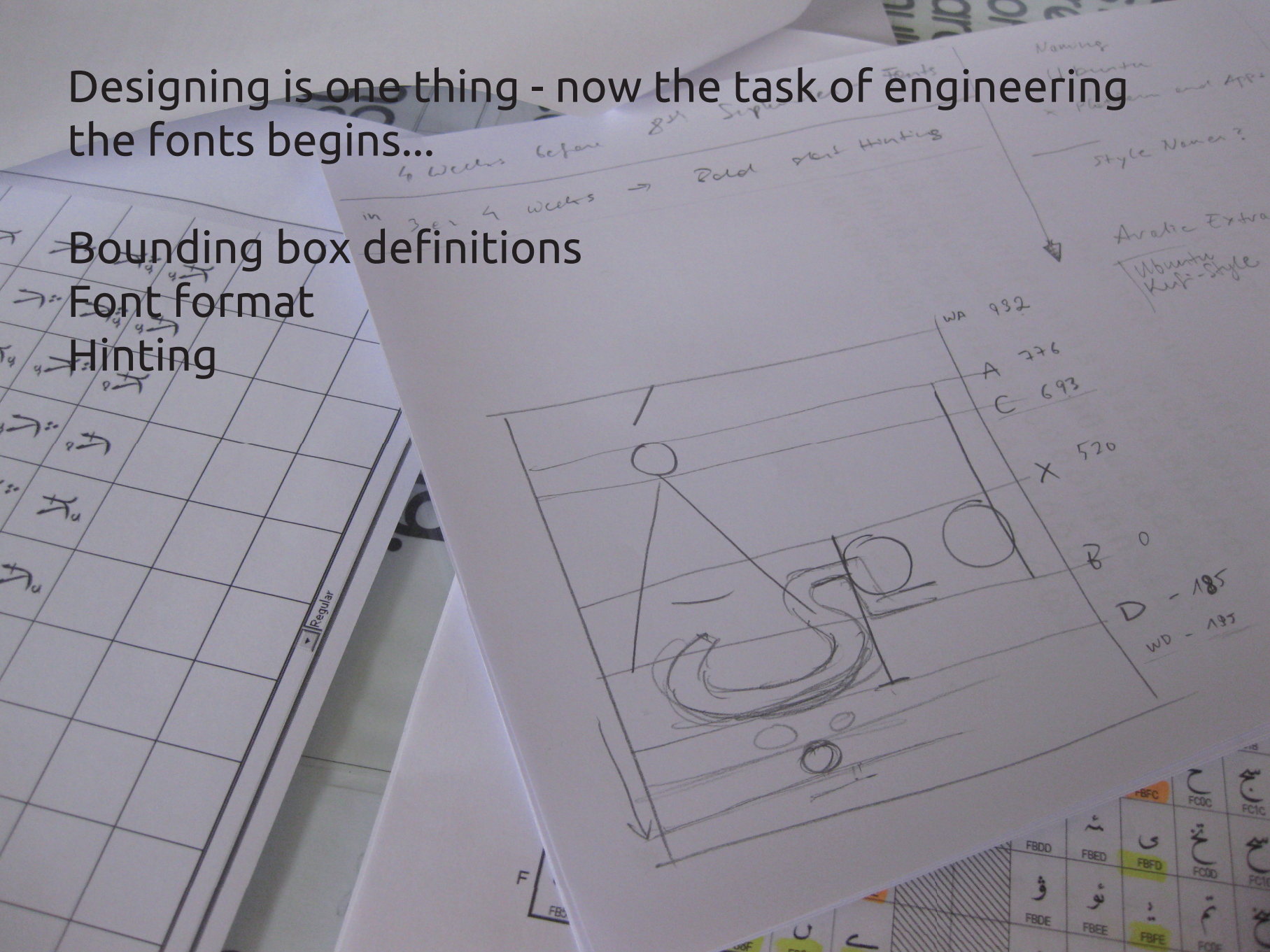
At the bottom, the status bar shows 'Kerning', 'Size: 192', and 'Options'. The Windows taskbar at the very bottom shows the Start button and several open applications, including Windows Live Messenger, David Marshall's email, Dalton Maag Mail, Credit Card for brun..., BOLD, Adobe InDesign CS3, and FontLab Studio.

Designing is one thing - now the task of engineering the fonts begins...

Bounding box definitions

Font format

Hinting



FontLab Studio Classes

File Edit View

Curve tool

Font - Ubuntu

.notdef	.null	C
per		
space	exclam	quo
at	A	
grave	á	
Euro	glyph129	quot
uni00A0	exclm	dot
Agrave	Ascute	Acirc
À	Á	Â
agrave	ascute	acirc
à	á	â
Amacron	amacron	Ab
Ā	ā	Ă
Gdotaccent	gdotaccent	Gcirc
Ĝ	ĝ	Ĉ
Icaron	Ldot	lc
Ĭ	Ĺ	Ľ
scedilla	Tcommaaccent	tcom
Œ	Ť	ı
uni021A	uni021B	dot
Ŧ	ț	
fourinferior	fiveinferior	sixin
4	5	
partialdiff	Delta	pro
∂	Δ	ı
zero.alt	one.alt	tw
0	1	

Name	Unicode	Width	<-	->	Type
U	0055	692	83	83	
Ugrave	00D9	692	83	83	
Uacute	00DA	692	83	83	
Ucircumflex	00DB	692	83	83	
Udieresis	00DC	692	83	83	
Utilde	0168	692	83	83	
Umacron	016A	692	83	83	
Ubreve	016C	692	83	83	
Uring	016E	692	83	83	
Uhungarumlaut	0170	692	83	83	
Uogonek	0172	692	83	83	
Uhorn	01AF	714	83	-22	
uni01D3	01D3	692	83	83	
uni01D5	01D5	692	83	83	
uni01D7	01D7	692	83	83	
uni01D9	01D9	692	83	83	
uni01DB	01DB	692	83	83	
uni0214	0214	692	83	83	
uni0216	0216	692	83	83	

_LAT_U_UC: U' Ugrave Uacute Ucircumflex Udieresis Utilde Umacron Ubreve Uring Uhungarumlaut Uogonek Uhorn uni01D3 uni01D5 uni01D7 uni01D9 uni01DB uni0214 uni0216

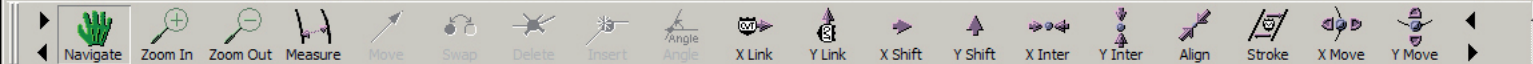
ure...

Sort Glyphs

glyph21	glyph22	glyph23	glyph24	glyph25	glyph26	glyph27	glyph28	glyph29	glyph30	glyph31
five	six	seven	eight	nine	colon	semicolon	less	equal	greater	question
5	6	7	8	9	:	;	<	=	>	?
U	V	W	X	Y	Z	[\]	^	_
u	v	w	x	y	z	bracketleft	bar	bracketright	asciitilde	glyph127
u	v	w	x	y	z	{		}	~	
hr	bullet	endash	emdash	tildes	trademark	scaron	guillemotleft	oe	glyph157	Ydieresis
•	-	—	~	™	š	>	œ			ÿ
mu	paragraph	periodcentered	cedilla	onesuperior	ordmasculine	guillemotright	onequarter	onehalf	threequarters	question
μ	¶	·	¸	¹	º	»	¼	½	¾	¿
Utilde	Udieresis	multiply	Oslash	Ugrave	Uacute	Ucircumflex	Udieresis	Yacute	Thorn	germandbl
Õ	Ö	×	Ø	Ù	Ú	Û	Ü	Ý	Þ	ß
õ	ö	÷	ø	ù	ú	û	ü	ý	þ	ÿ
ebreve	Edotaccent	edotaccent	Eogonek	ogonek	Ecaron	ecaron	Gcircumflex	gcircumflex	Gbreve	gbreve
ě	É	é	Ę	ę	Ě	ě	Ĝ	ĝ	Ĭ	ĭ
Jcircumflex	Ucircumflex	Kcommaaccent	Kgreenland	Kgreenland	Lacute	Lscute	Lcommaaccent	Lcommaaccent	Lcaron	
Ĵ	ĵ	Ķ	ķ	Ķ	Ķ	Ĺ	ĺ	Ł	ł	Ł
Racute	racute	Rcommaaccent	Rcommaaccent	Rcaron	rcaron	Scute	scute	Scircumflex	scircumflex	Scedilla
Ŕ	ŕ	Ŗ	ŗ	Ř	ř	Ś	ś	Ŝ	ŝ	Ş
Ŕ	ŕ	Ŗ	ŗ	Ř	ř	Ś	ś	Ŝ	ŝ	Ş
Ycircumflex	ycircumflex	Zacute	zacute	Zdotaccent	zdotaccent	Zcaron	zcaron	longs	Scommaaccent	scommaaccent
Ŷ	ŷ	Ź	ź	Ż	ż	Ž	ž	ƒ	Ş	ş
zerosuperior	foursuperior	fiveuperior	sixsuperior	sevenuperior	eightsuperior	ninesuperior	zeroinferior	oneinferior	twoinferior	threeinferior
0	4	5	6	7	8	9	0	1	2	3
twoseven	threeeven	fourseven	fiveeven	sixsevent	oneninth	twoninth	fourninth	fineninth	sevenninth	eighninth
2/7	3/7	4/7	5/7	6/7	1/9	2/9	4/9	5/9	7/9	8/9
f_f_i	f_f_l	glyph471	glyph472	glyph473	glyph474	glyph475	glyph476	glyph477	glyph478	glyph479
ffi	ffl									
one.zinif	two.zinif	three.zinif	four.zinif	five.zinif	six.zinif	seven.zinif	eight.zinif	nine.zinif	glyph510	glyph511
1	2	3	4	5	6	7	8	9	0	

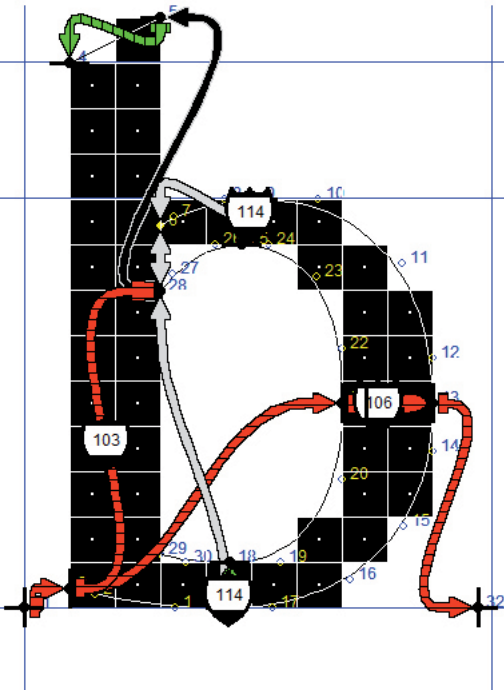
19 glyphs in this kerning class

Accent



glyph 69, char 0x62 (b), LowerCase, 13 pt/17 ppm, grid-fitted, pixels (device units)

nnbnonoboobbbCEHO aller
nnbnonoboobbbCEHO aller



• bbbbbb
8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52

Control program (187 e)

- 81: 83
- RoundStroke
- 82: 102
- 83: 100
- 84: 93
- 85: 72
- White
- X
- StraightStroke
- 70: 88
- 71: 83
- 72: 180
- 73: 82
- RoundStroke
- 74: 60 = 73@42
- 75: 37
- 76: 10
- 77: 256
- Black
- Y
- StraightStroke
- 86: 77
- 87: 69
- 88: 59
- 89: 196
- RoundStroke
- 90: 85 = 86@187
- 91: 84 = 86@187
- 92: 81 = 86@187
- 93: 62 = 88@187
- LowerCase
- Black
- X
- StraightStroke
- 102: 178
- 103: 82
- 104: 80
- 105: 234
- RoundStroke
- 106: 97 = 103@104
- 107: 90 = 103@104
- 108: 221
- 109: 170
- White
- X
- StraightStroke
- 94: 82
- 95: 76
- 96: 175
- 97: 57
- RoundStroke
- ...

The future and what the fonts mean for Ubuntu developers...

More font styles

Asian script systems

Extended typographic features

Applications need to be OpenType aware

Applications need to support complex scripts

The Ubuntu font family is a
great journey.

Thanks for listening.

Bruno Maag
Dalton Maag Ltd
at the Ubuntu Developer Summit, 12 May 2010