

1 T_EX Gyre Pagella, T1-encoded small-caps

T_EX .tfm font: TeXGyre PagellaX with CMap

	0	1	2	3	4	5	6	7	
'00x	` 0	´ 1	^ 2	~ 3	¨ 4	˘ 5	° 6	ˇ 7	"0x
'01x	˘ 8	˘ 9	˙ 10	˚ 11	˛ 12	˜ 13	< 14	> 15	
'02x	“ 16	” 17	„ 18	« 19	» 20	– 21	— 22	23	"1x
'03x	o 24	I 25	J 26	27	28	29	30	31	
'04x	□ 32	! 33	" 34	# 35	\$ 36	% 37	& 38	' 39	"2x
'05x	(40	) 41	* 42	+ 43	, 44	- 45	. 46	/ 47	
'06x	0 48	1 49	2 50	3 51	4 52	5 53	6 54	7 55	"3x
'07x	8 56	9 57	: 58	; 59	< 60	= 61	> 62	? 63	
'10x	@ 64	A 65	B 66	C 67	D 68	E 69	F 70	G 71	"4x
'11x	H 72	I 73	J 74	K 75	L 76	M 77	N 78	O 79	
'12x	P 80	Q 81	R 82	S 83	T 84	U 85	V 86	W 87	"5x
'13x	X 88	Y 89	Z 90	[91	\ 92	] 93	^ 94	_ 95	
'14x	' 96	A 97	B 98	C 99	D 100	E 101	F 102	G 103	"6x
'15x	H 104	I 105	J 106	K 107	L 108	M 109	N 110	O 111	
'16x	P 112	Q 113	R 114	S 115	T 116	U 117	V 118	W 119	"7x
'17x	X 120	Y 121	Z 122	{ 123	| 124	} 125	~ 126	- 127	
'20x	Ă 128	Ą 129	Ć 130	Č 131	Ď 132	Ě 133	Ę 134	Ğ 135	"8x
'21x	Ł 136	Ł 137	Ł 138	Ń 139	Ń 140	Ń 141	Œ 142	Ŕ 143	
'22x	Ř 144	Ś 145	Š 146	Ş 147	Ť 148	Ţ 149	Ů 150	Ű 151	"9x
'23x	Ÿ 152	Ž 153	Ž 154	Ž 155	IJ 156	Í 157	Đ 158	Ş 159	
'24x	Ǻ 160	Ǻ 161	Ć 162	Č 163	Ď 164	Ě 165	Ę 166	Ğ 167	"Ax
'25x	Ł 168	Ł 169	Ł 170	Ń 171	Ń 172	Ń 173	Œ 174	Ŕ 175	
'26x	Ř 176	Ś 177	Š 178	Ş 179	Ť 180	Ţ 181	Ů 182	Ű 183	"Bx
'27x	Ÿ 184	Ž 185	Ž 186	Ž 187	IJ 188	Í 189	Đ 190	Ş 191	
'30x	À 192	Á 193	Â 194	Ã 195	Ä 196	Å 197	Æ 198	Ç 199	"Cx
'31x	È 200	É 201	Ê 202	Ë 203	Ì 204	Í 205	Î 206	Ï 207	
'32x	Ð 208	Ñ 209	Ò 210	Ó 211	Ô 212	Õ 213	Ö 214	Œ 215	"Dx
'33x	Ø 216	Ù 217	Ú 218	Û 219	Ü 220	Ý 221	Þ 222	ŠS 223	
'34x	À 224	Á 225	Â 226	Ã 227	Ä 228	Å 229	Æ 230	Ç 231	"Ex
'35x	È 232	É 233	Ê 234	Ë 235	Ì 236	Í 237	Î 238	Ï 239	
'36x	Ð 240	Ñ 241	Ò 242	Ó 243	Ô 244	Õ 245	Ö 246	Œ 247	"Fx
'37x	Ø 248	Ù 249	Ú 250	Û 251	Ü 252	Ý 253	Þ 254	ŠS 255	
	"8	"9	"A	"B	"C	"D	"E	"F	

Here's how the font table copies, both with and without a CMap file.

TEX .tfm font: TeXGyre PagellaX without any CMap
'0'1'2'3'4'5'6'7
'00x` 0 ^ 1 ^ 2 ^ 3 ^ 4 ^ 5 ^ 6 ^ 7 non-combining accents
'0x
'01x ~ 8 ~ 9 ~ 10 , 11 , 12 , 13 < 14 > 15
'02x " 16 " 17 „ 18 « 19 » 20 - 21 — 22 23
'1x missing characters
'03x 24 25 26 ff 27 fi 28 fl 29 ffi 30 ffl 31
'04x 32 ! 33 " 34 # 35 \$ 36 % 37 & 38 ' 39
'2x no visible space character
'05x (40) 41 * 42 + 43 , 44 - 45 . 46 / 47
'06x 0 48 1 49 2 50 3 51 4 52 5 53 6 54 7 55
'3x
'07x 8 56 9 57 : 58 ; 59 < 60 = 61 > 62 ? 63
'10x @ 64 A 65 B 66 C 67 D 68 E 69 F 70 G 71
'4x
'11x H 72 I 73 J 74 K 75 L 76 M 77 N 78 O 79
'12x P 80 Q 81 R 82 S 83 T 84 U 85 V 86 W 87
'5x
'13x X 88 Y 89 Z 90 [91 \ 92] 93 ^ 94 _ 95
'14x ' 96 a 97 b 98 c 99 d 100 e 101 f 102 g 103
'6x
'15x h 104 i 105 j 106 k 107 l 108 m 109 n 110 o 111
'16x p 112 q 113 r 114 s 115 t 116 u 117 v 118 w 119
'7x
'17x x 120 y 121 z 122 { 123 | 124 } 125 ~ 126 127
'20x A 128 A 129 C 130 C 131 D 132 E 133 E 134 G 135
'8x most accents are missing
'21x L 136 L 137 Ł 138 N 139 N 140 141 O 142 R 143
'22x R 144 S 145 Š 146 S 147 T 148 T 149 U 150 U 151
'9x missing characters
'23x Ÿ 152 Z 153 Ž 154 Z 155 I 156 I 157 158 § 159
'24x a 160 a 161 c 162 c 163 d 164 e 165 e 166 g 167
'Ax similarly with lowercase letters
'25x l 168 l 169 l 170 n 171 n 172 173 o 174 r 175
'26x r 176 s 177 s 178 s 179 t 180 t 181 u 182 u 183
'Bx missing character
'27x y 184 z 185 z 186 z 187 ¼ 188 ; 189 ; 190 £ 191
'30x Å 192 Å 193 Å 194 Å 195 Å 196 Å 197 Æ 198 Ç 199
'Cx wrong character
'31x È 200 É 201 Ê 202 Ë 203 Ì 204 Í 205 Î 206 Ï 207
'32x Ð 208 Ñ 209 Ò 210 Ó 211 Ô 212 Õ 213 Ö 214 OE 215
'Dx decomposed ligature
'33x Ø 216 Ù 217 Ú 218 Û 219 Ü 220 Ý 221 Þ 222 ß 223
'34x a 224 a 225 a 226 a 227 a 228 a 229 æ 230 ç 231
'Ex most accents are missing
'35x e 232 e 233 e 234 e 235 i 236 i 237 i 238 i 239
'36x ð 240 ñ 241 ò 242 ó 243 ô 244 õ 245 ö 246 ÷ 247
'Fx wrong characters
'37x ø 248 ù 249 ú 250 û 251 ü 252 ý 253 þ 254 ÿ 255
'8'9'A'B'C'D'E'F

TEX .tfm font: TeXGyre PagellaX with CMap
'0'1'2'3'4'5'6'7
'00x` 0 ^ 1 ^ 2 ^ 3 ^ 4 ^ 5 ^ 6 ^ 7 combining accents
'0x
'01x ~ 8 ~ 9 ~ 10 , 11 , 12 , 13 < 14 > 15
'02x " 16 " 17 „ 18 « 19 » 20 - 21 — 22 23
'1x
'03x o 24 i 25 j 26 ff 27 fi 28 fl 29 ffi 30 ffl 31
'04x _ 32 ! 33 " 34 # 35 \$ 36 % 37 & 38 ' 39
'2x
'05x (40) 41 * 42 + 43 , 44 - 45 . 46 / 47
'06x 0 48 1 49 2 50 3 51 4 52 5 53 6 54 7 55
'3x
'07x 8 56 9 57 : 58 ; 59 < 60 = 61 > 62 ? 63
'10x @ 64 A 65 B 66 C 67 D 68 E 69 F 70 G 71
'4x
'11x H 72 I 73 J 74 K 75 L 76 M 77 N 78 O 79
'12x P 80 Q 81 R 82 S 83 T 84 U 85 V 86 W 87
'5x
'13x X 88 Y 89 Z 90 [91 \ 92] 93 ^ 94 _ 95
'14x ' 96 a 97 b 98 c 99 d 100 e 101 f 102 g 103
'6x
'15x h 104 i 105 j 106 k 107 l 108 m 109 n 110 o 111
'16x p 112 q 113 r 114 s 115 t 116 u 117 v 118 w 119
'7x
'17x x 120 y 121 z 122 { 123 | 124 } 125 ~ 126 - 127
'20x Å 128 Å 129 Č 130 Č 131 Ď 132 Ě 133 Ě 134 Ğ 135
'8x
'21x Ĺ 136 Ĺ 137 Ł 138 Ń 139 Ń 140 Ņ 141 Ő 142 Ŕ 143
'22x Ŗ 144 Ś 145 Š 146 Ś 147 Ţ 148 Ţ 149 Ū 150 Ū 151
'9x
'23x Ÿ 152 Ž 153 Ž 154 Ž 155 IJ 156 í 157 d 158 § 159
'24x ä 160 ä 161 é 162 č 163 d' 164 ě 165 e 166 ğ 167
'Ax
'25x Í 168 Í 169 Í 170 í 171 ñ 172 ñ 173 ó 174 f 175
'26x ř 176 ś 177 š 178 š 179 ř 180 ŧ 181 ú 182 ū 183
'Bx
'27x ŷ 184 ž 185 ž 186 ž 187 ij 188 ; 189 ; 190 £ 191
'30x Å 192 Å 193 Å 194 Å 195 Å 196 Å 197 Æ 198 Ç 199
'Cx
'31x È 200 É 201 Ê 202 Ë 203 Ì 204 Í 205 Î 206 Ï 207
'32x Ð 208 Ñ 209 Ò 210 Ó 211 Ô 212 Õ 213 Ö 214 OE 215
'Dx decomposed ligature
'33x Ø 216 Ù 217 Ú 218 Û 219 Ü 220 Ý 221 Þ 222 ß 223
'34x à 224 á 225 â 226 ã 227 ä 228 å 229 æ 230 ç 231
'Ex
'35x è 232 é 233 ê 234 ë 235 ì 236 í 237 î 238 ï 239
'36x ð 240 ñ 241 ò 242 ó 243 ô 244 õ 245 ö 246 oe 247
'Fx
'37x ø 248 ù 249 ú 250 û 251 ü 252 ý 253 þ 254 ÿ 255
'8'9'A'B'C'D'E'F

2 Latin Modern

This family of fonts does not use the ‘virtual’ font mechanism at all, but having a CMap is still necessary.

T_EX .tfm font: ec-lmr10 with CMap

	‘0	‘1	‘2	‘3	‘4	‘5	‘6	‘7	
‘00x	` 0	´ 1	^ 2	~ 3	¨ 4	” 5	° 6	ˇ 7	“0x
‘01x	˘ 8	¯ 9	˙ 10	˚ 11	˛ 12	, 13	‹ 14	› 15	
‘02x	“ 16	” 17	„ 18	« 19	» 20	– 21	— 22	23	“1x
‘03x	0 24	1 25	2 26	ff 27	fi 28	fl 29	ffi 30	ffl 31	
‘04x	□ 32	! 33	" 34	# 35	\$ 36	% 37	& 38	' 39	“2x
‘05x	(40	) 41	* 42	+ 43	, 44	- 45	. 46	/ 47	
‘06x	0 48	1 49	2 50	3 51	4 52	5 53	6 54	7 55	“3x
‘07x	8 56	9 57	: 58	; 59	< 60	= 61	> 62	? 63	
‘10x	@ 64	A 65	B 66	C 67	D 68	E 69	F 70	G 71	“4x
‘11x	H 72	I 73	J 74	K 75	L 76	M 77	N 78	O 79	
‘12x	P 80	Q 81	R 82	S 83	T 84	U 85	V 86	W 87	“5x
‘13x	X 88	Y 89	Z 90	[91	\ 92	] 93	^ 94	_ 95	
‘14x	‘ 96	a 97	b 98	c 99	d 100	e 101	f 102	g 103	“6x
‘15x	h 104	i 105	j 106	k 107	l 108	m 109	n 110	o 111	
‘16x	p 112	q 113	r 114	s 115	t 116	u 117	v 118	w 119	“7x
‘17x	x 120	y 121	z 122	{ 123	| 124	} 125	~ 126	- 127	
‘20x	Ā 128	Ą 129	Ć 130	Č 131	Ď 132	Ě 133	Ę 134	Ğ 135	“8x
‘21x	Ĺ 136	Ł 137	Ł 138	Ń 139	Ň 140	Đ 141	Ö 142	Ř 143	
‘22x	Ř 144	Ś 145	Š 146	Ş 147	Ť 148	Ŧ 149	Ů 150	Ű 151	“9x
‘23x	Ÿ 152	Ž 153	Ž 154	Ž 155	IJ 156	İ 157	đ 158	§ 159	
‘24x	ă 160	ą 161	ć 162	č 163	ď 164	ě 165	ę 166	ğ 167	“Ax
‘25x	í 168	ı 169	ı 170	ń 171	ň 172	ŋ 173	ő 174	ı 175	
‘26x	ř 176	ś 177	š 178	ş 179	ť 180	ŧ 181	ů 182	ű 183	“Bx
‘27x	ÿ 184	ź 185	ž 186	ž 187	ij 188	i 189	ı 190	£ 191	
‘30x	À 192	Á 193	Â 194	Ã 195	Ä 196	Å 197	Æ 198	Ç 199	“Cx
‘31x	È 200	É 201	Ê 202	Ë 203	Ì 204	Í 205	Î 206	Ï 207	
‘32x	Ð 208	Ñ 209	Ò 210	Ó 211	Ô 212	Õ 213	Ö 214	Œ 215	“Dx
‘33x	Ø 216	Ù 217	Ú 218	Û 219	Ü 220	Ý 221	Þ 222	ŠS 223	
‘34x	à 224	á 225	â 226	ã 227	ä 228	å 229	æ 230	ç 231	“Ex
‘35x	è 232	é 233	ê 234	ë 235	ì 236	í 237	î 238	ï 239	
‘36x	ð 240	ñ 241	ò 242	ó 243	ô 244	õ 245	ö 246	œ 247	“Fx
‘37x	ø 248	ù 249	ú 250	û 251	ü 252	ý 253	þ 254	ß 255	
	“8	“9	“A	“B	“C	“D	“E	“F	

TeX .tfm font: ec-lmcs10 with CMap

	0	1	2	3	4	5	6	7	
'00x	` 0	´ 1	^ 2	~ 3	¨ 4	” 5	° 6	ˇ 7	"0x
'01x	˘ 8	¯ 9	· 10	→ 11	↵ 12	, 13	‹ 14	› 15	
'02x	“ 16	” 17	„ 18	« 19	» 20	— 21	— 22	23	"1x
'03x	0 24	I 25	J 26	27	28	29	30	31	
'04x	□ 32	! 33	" 34	# 35	\$ 36	% 37	& 38	' 39	"2x
'05x	(40	) 41	* 42	+ 43	, 44	- 45	. 46	/ 47	
'06x	0 48	1 49	2 50	3 51	4 52	5 53	6 54	7 55	"3x
'07x	8 56	9 57	: 58	; 59	< 60	= 61	> 62	? 63	
'10x	@ 64	A 65	B 66	C 67	D 68	E 69	F 70	G 71	"4x
'11x	H 72	I 73	J 74	K 75	L 76	M 77	N 78	O 79	
'12x	P 80	Q 81	R 82	S 83	T 84	U 85	V 86	W 87	"5x
'13x	X 88	Y 89	Z 90	[91	\ 92	] 93	^ 94	_ 95	
'14x	‘ 96	A 97	B 98	C 99	D 100	E 101	F 102	G 103	"6x
'15x	H 104	I 105	J 106	K 107	L 108	M 109	N 110	O 111	
'16x	P 112	Q 113	R 114	S 115	T 116	U 117	V 118	W 119	"7x
'17x	X 120	Y 121	Z 122	{ 123	| 124	} 125	~ 126	- 127	
'20x	Ǻ 128	Ą 129	Ć 130	Č 131	Ď 132	Ě 133	Ě 134	Ǧ 135	"8x
'21x	Ł 136	Ł 137	Ł 138	Ń 139	Ń 140	Đ 141	Ŏ 142	Ř 143	
'22x	Ř 144	Ś 145	Š 146	Ş 147	Ť 148	Ţ 149	Ů 150	Ů 151	"9x
'23x	Ÿ 152	Ž 153	Ž 154	Ž 155	IJ 156	İ 157	Đ 158	Ş 159	
'24x	Ǻ 160	Ą 161	Ć 162	Č 163	Ď 164	Ě 165	Ě 166	Ǧ 167	"Ax
'25x	Ł 168	Ł 169	Ł 170	Ń 171	Ń 172	Đ 173	Ŏ 174	Ř 175	
'26x	Ř 176	Ś 177	Š 178	Ş 179	Ť 180	Ţ 181	Ů 182	Ů 183	"Bx
'27x	Ÿ 184	Ž 185	Ž 186	Ž 187	IJ 188	ı 189	ı 190	£ 191	
'30x	À 192	Á 193	Â 194	Ã 195	Ä 196	Å 197	Æ 198	Ç 199	"Cx
'31x	È 200	É 201	Ê 202	Ë 203	Ì 204	Í 205	Î 206	Ï 207	
'32x	Ð 208	Ñ 209	Ò 210	Ó 211	Ô 212	Õ 213	Ö 214	Œ 215	"Dx
'33x	Ø 216	Ù 217	Ú 218	Û 219	Ü 220	Ý 221	Þ 222	ŠS 223	
'34x	À 224	Á 225	Â 226	Ã 227	Ä 228	Å 229	Æ 230	Ç 231	"Ex
'35x	È 232	É 233	Ê 234	Ë 235	Ì 236	Í 237	Î 238	Ï 239	
'36x	Ð 240	Ñ 241	Ò 242	Ó 243	Ô 244	Õ 245	Ö 246	Œ 247	"Fx
'37x	Ø 248	Ù 249	Ú 250	Û 251	Ü 252	Ý 253	Þ 254	ŠS 255	
	"8	"9	"A	"B	"C	"D	"E	"F	

3 Bitstream Charter

Now let's look at using the (Bitstream) Charter font, as distributed with \TeX Live. There's no (expert) SmallCaps font, so it fakes one, using virtual fonts.

\TeX .tfm font: **bchrc8t**

Faked small-caps, as currently generated with fontinst.

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	` 0	' 1	^ 2	~ 3	¨ 4	˘ 5	° 6	ˇ 7	"0x
'01x	˘ 8	˘ 9	˙ 10	, 11	˘ 12	, 13	< 14	> 15	
'02x	“ 16	” 17	„ 18	« 19	» 20	— 21	— 22	23	"1x
'03x	■ 24	I 25	J 26	FF 27	FI 28	FL 29	FFI 30	FFL 31	
'04x	⏟ 32	! 33	" 34	# 35	\$ 36	% 37	& 38	' 39	"2x
'05x	(40	) 41	* 42	+ 43	, 44	- 45	. 46	/ 47	
'06x	0 48	1 49	2 50	3 51	4 52	5 53	6 54	7 55	"3x
'07x	8 56	9 57	: 58	; 59	< 60	= 61	> 62	? 63	
'10x	@ 64	A 65	B 66	C 67	D 68	E 69	F 70	G 71	"4x
'11x	H 72	I 73	J 74	K 75	L 76	M 77	N 78	O 79	
'12x	P 80	Q 81	R 82	S 83	T 84	U 85	V 86	W 87	"5x
'13x	X 88	Y 89	Z 90	[91	\ 92	] 93	^ 94	_ 95	
'14x	' 96	A 97	B 98	C 99	D 100	E 101	F 102	G 103	"6x
'15x	H 104	I 105	J 106	K 107	L 108	M 109	N 110	O 111	
'16x	P 112	Q 113	R 114	S 115	T 116	U 117	V 118	W 119	"7x
'17x	X 120	Y 121	Z 122	{ 123	| 124	} 125	~ 126	- 127	
'20x	Ă 128	Ą 129	Ć 130	Č 131	Ď 132	Ě 133	Ę 134	Ğ 135	"8x
'21x	Í 136	Ĺ 137	Ł 138	Ń 139	Ň 140	■ 141	Ó 142	Ŕ 143	
'22x	Ř 144	Ś 145	Š 146	Ş 147	Ť 148	Ŧ 149	Ů 150	Ű 151	"9x
'23x	Ÿ 152	Ž 153	Ž 154	Ž 155	IJ 156	İ 157	Ð 158	§ 159	
'24x	Ă 160	Ą 161	Ć 162	Č 163	Ď 164	Ě 165	Ę 166	Ğ 167	"Ax
'25x	Í 168	Ĺ 169	Ł 170	Ń 171	Ň 172	■ 173	Ó 174	Ŕ 175	
'26x	Ř 176	Ś 177	Š 178	Ş 179	Ť 180	Ŧ 181	Ů 182	Ű 183	"Bx
'27x	Ÿ 184	Ž 185	Ž 186	Ž 187	IJ 188	ı 189	ć 190	£ 191	
'30x	À 192	Á 193	Â 194	Ã 195	Ä 196	Å 197	Æ 198	Ç 199	"Cx
'31x	È 200	É 201	Ê 202	Ë 203	Ì 204	Í 205	Î 206	Ï 207	
'32x	Ð 208	Ñ 209	Ò 210	Ó 211	Ô 212	Õ 213	Ö 214	Œ 215	"Dx
'33x	Ø 216	Ù 217	Ú 218	Û 219	Ü 220	Ý 221	Þ 222	ŠŠ 223	
'34x	À 224	Á 225	Â 226	Ã 227	Ä 228	Å 229	Æ 230	Ç 231	"Ex
'35x	È 232	É 233	Ê 234	Ë 235	Ì 236	Í 237	Î 238	Ï 239	
'36x	Ð 240	Ñ 241	Ò 242	Ó 243	Ô 244	Õ 245	Ö 246	Œ 247	"Fx
'37x	Ø 248	Ù 249	Ú 250	Û 251	Ü 252	Ý 253	Þ 254	ŠŠ 255	
	"8	"9	"A	"B	"C	"D	"E	"F	

Notice there are no characters at positions 24 (perthousandzero), 141 (Ng), 173 (ng) and that 32 (visiblespace) uses rules, not a glyph.

As seen in the bchrc8t.vpl file, this font uses bchr8r at two different sizes.
This is the normal T1-encoded roman font for Charter.

```
(MAPFONT D 0
  (FONTNAME bchr8r)
  (FONTCHECKSUM 0 1764027361)
  (FONTAT R 0.8)
  (FONTDSIZE R 10.0)
)
```

```
(MAPFONT D 1
  (FONTNAME bchr8r)
  (FONTCHECKSUM 0 1764027361)
  (FONTAT R 1.0)
  (FONTDSIZE R 10.0)
)
```

TEX .tfm font: bchrc8t
Faked small-caps, as currently generated with fontinst.

```
'01'2'3'4'5'6'7
'00x 0' 1^ 2^ 3^ 4^ 5^ 6^ 7
'0x
'01x~ 8' 9' 10, 11, 12, 13 < 14 > 15
'02x " 16 " 17 „ 18 « 19 » 20 - 21 — 22 23
'1x ← missing characters
'03x 24 I 25 J 26 FF 27 FI 28 FL 29 FFI 30 FFL 31
'04x 32 ! 33 " 34 # 35 $ 36 % 37 & 38 ' 39
'2x ←
'05x ( 40 ) 41 * 42 + 43 , 44 - 45 . 46 / 47
'06x 0 48 1 49 2 50 3 51 4 52 5 53 6 54 7 55
'3x
'07x 8 56 9 57 : 58 ; 59 < 60 = 61 > 62 ? 63
'10x @ 64 A 65 B 66 C 67 D 68 E 69 F 70 G 71
'4x
'11x H 72 I 73 J 74 K 75 L 76 M 77 N 78 O 79
'12x P 80 Q 81 R 82 S 83 T 84 U 85 V 86 W 87
'5x
'13x X 88 Y 89 Z 90 [ 91 \ 92 ] 93 ^ 94 _ 95
'14x ' 96 A 97 B 98 C 99 D 100 E 101 F 102 G 103
'6x capitals here should be lower-case
'15x H 104 I 105 J 106 K 107 L 108 M 109 N 110 O 111
'16x P 112 Q 113 R 114 S 115 T 116 U 117 V 118 W 119
'7x
'17x X 120 Y 121 Z 122 { 123 | 124 } 125 ~ 126 - 127
'20x^A
128 Å 129 ^C accent is before the base
130 ^C
131 ^D
132 ^E
133, E 134 ^G
135
'8x
'21x^L 136 L' 137 Ł 138 ^N
139 ^N
140 141 ^O unwanted line-breaks after accented capitals
142 R ← missing character
143
'22x^R
144 ^S
145 Š 146 S 147 ^T
148 T 149 ^U
150 ^U
151
'9x
'23x ^Y 152 Z decomposed ligature
153 Ž 154 ^Z
155 IJ 156 I ←
157 Đ 158 § 159
'24x^A capitals here should be lower-case
160 Å 161 ^C
162 ^C
163 ^D
```

TEX .tfm font: bchr8s
This is 'bchr8t' edited to make accents come after the base. It doesn't need a separate encoding or CMap, since characters still are coming from 'bchr8r'.

```
'01'2'3'4'5'6'7
'00x 0' 1^ 2^ 3^ 4^ 5^ 6^ 7
'0x
'01x~ 8' 9' 10, 11, 12, 13 < 14 > 15
'02x " 16 " 17 „ 18 « 19 » 20 - 21 — 22 23
'1x ← ← missing characters
'03x 24 I 25 26 ff 27 fi 28 fl 29 ffi 30 ffi 31
'04x 32 ! 33 " 34 # 35 $ 36 % 37 & 38 ' 39
'2x ←
'05x ( 40 ) 41 * 42 + 43 , 44 - 45 . 46 / 47
'06x 0 48 1 49 2 50 3 51 4 52 5 53 6 54 7 55
'3x
'07x 8 56 9 57 : 58 ; 59 < 60 = 61 > 62 ? 63
'10x @ 64 A 65 B 66 C 67 D 68 E 69 F 70 G 71
'4x
'11x H 72 I 73 J 74 K 75 L 76 M 77 N 78 O 79
'12x P 80 Q 81 R 82 S 83 T 84 U 85 V 86 W 87
'5x
'13x X 88 Y 89 Z 90 [ 91 \ 92 ] 93 ^ 94 _ 95
'14x ' 96 a 97 b 98 c 99 d 100 e 101 f 102 g 103
'6x
'15x h 104 i 105 j 106 k 107 l 108 m 109 n 110 o 111
'16x p 112 q 113 r 114 s 115 t 116 u 117 v 118 w 119
'7x
'17x x 120 y 121 z 122 { 123 | 124 } 125 ~ 126 - 127
'20x Å
128 Å 129 Ć combining accents coming after the base!
130 Ć
131 Ď
132 Ě
133 Ě 134 Ğ
135
'8x not an accent!
'21x Ĺ 136 L' 137 Ł 138 Ń
139 Ń
140 141 Ő unwanted linebreaks
142 R ← missing character
143
'22x Ř
144 Š
145 Š 146 § 147 Ť
148 Ť 149 Ů
150 Ů
151
'9x
'23x Ÿ 152 Ž decomposed ligature
153 Ž 154 Ž wrong accent
155 IJ 156 ĩ ←
157 đ 158 § 159
'24x ä 160 å 161 ě 162 č 163 ď 164 ě 165 ě 166 ğ 167
'^Ax
'^25x ĩ
```

TeX .tfm font: bchr8t

The virtual font 'bchr8t' actually uses 'bchr8r' font, encoding a subset of bchr8a.pfb.

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	` 0	' 1	^ 2	~ 3	¨ 4	ˆ 5	° 6	ˇ 7	"0x
'01x	˘ 8	¯ 9	· 10	¸ 11	˙ 12	, 13	◁ 14	▷ 15	
'02x	“ 16	” 17	„ 18	« 19	» 20	— 21	— 22	23	"1x
'03x	■ 24	l 25	l 26	ff 27	fi 28	fl 29	ffi 30	ffl 31	
'04x	⌵ 32	! 33	" 34	# 35	\$ 36	% 37	& 38	' 39	"2x
'05x	(40	) 41	* 42	+ 43	, 44	- 45	. 46	/ 47	
'06x	0 48	1 49	2 50	3 51	4 52	5 53	6 54	7 55	"3x
'07x	8 56	9 57	: 58	; 59	< 60	= 61	> 62	? 63	
'10x	@ 64	A 65	B 66	C 67	D 68	E 69	F 70	G 71	"4x
'11x	H 72	I 73	J 74	K 75	L 76	M 77	N 78	O 79	
'12x	P 80	Q 81	R 82	S 83	T 84	U 85	V 86	W 87	"5x
'13x	X 88	Y 89	Z 90	[91	\ 92	] 93	^ 94	_ 95	
'14x	‘ 96	a 97	b 98	c 99	d 100	e 101	f 102	g 103	"6x
'15x	h 104	i 105	j 106	k 107	l 108	m 109	n 110	o 111	
'16x	p 112	q 113	r 114	s 115	t 116	u 117	v 118	w 119	"7x
'17x	x 120	y 121	z 122	{ 123	| 124	} 125	~ 126	- 127	
'20x	Ā 128	Ą 129	Ć 130	Č 131	Ď 132	Ě 133	Ę 134	Ğ 135	"8x
'21x	Ł 136	Ĺ 137	Ł 138	Ń 139	Ň 140	■ 141	Ó 142	Ŕ 143	
'22x	Ř 144	Ś 145	Š 146	Ş 147	Ť 148	Ŧ 149	Ů 150	Ű 151	"9x
'23x	Ÿ 152	Ż 153	Ž 154	Ž 155	ı 156	İ 157	đ 158	ş 159	
'24x	ă 160	ą 161	ć 162	č 163	ď 164	ě 165	ę 166	ğ 167	"Ax
'25x	í 168	ł 169	ł 170	ń 171	ň 172	■ 173	ó 174	í 175	
'26x	ř 176	ś 177	š 178	ş 179	ť 180	ŧ 181	ů 182	ű 183	"Bx
'27x	ÿ 184	ż 185	ž 186	ž 187	ij 188	i 189	ç 190	£ 191	
'30x	À 192	Á 193	Â 194	Ã 195	Ä 196	Å 197	Æ 198	Ç 199	"Cx
'31x	È 200	É 201	Ê 202	Ë 203	Ì 204	Í 205	Î 206	Ï 207	
'32x	Ð 208	Ñ 209	Ò 210	Ó 211	Ô 212	Õ 213	Ö 214	Œ 215	"Dx
'33x	Ø 216	Ù 217	Ú 218	Û 219	Ü 220	Ý 221	Þ 222	ŠS 223	
'34x	à 224	á 225	â 226	ã 227	ä 228	å 229	æ 230	ç 231	"Ex
'35x	è 232	é 233	ê 234	ë 235	ì 236	í 237	î 238	ï 239	
'36x	ð 240	ñ 241	ò 242	ó 243	ô 244	õ 245	ö 246	œ 247	"Fx
'37x	ø 248	ù 249	ú 250	û 251	ü 252	ý 253	þ 254	ß 255	
	"8	"9	"A	"B	"C	"D	"E	"F	

T_EX .tfm font: bchr8s

This is ‘bchr8t’ edited to make accents come after the base. It doesn’t need a separate encoding or CMap, since characters still are coming from ‘bchr8r’.

	‘0	‘1	‘2	‘3	‘4	‘5	‘6	‘7	
‘00x	` 0	‘ 1	^ 2	~ 3	¨ 4	” 5	° 6	ˇ 7	“0x
‘01x	˘ 8	ˉ 9	˙ 10	˚ 11	˛ 12	˜ 13	˘ 14	˙ 15	
‘02x	“ 16	” 17	„ 18	« 19	» 20	– 21	— 22	23	“1x
‘03x	■ 24	1 25	▮ 26	ff 27	fi 28	fl 29	ffi 30	ffl 31	
‘04x	⌵ 32	! 33	" 34	# 35	\$ 36	% 37	& 38	' 39	“2x
‘05x	(40	) 41	* 42	+ 43	, 44	- 45	. 46	/ 47	
‘06x	0 48	1 49	2 50	3 51	4 52	5 53	6 54	7 55	“3x
‘07x	8 56	9 57	: 58	; 59	< 60	= 61	> 62	? 63	
‘10x	@ 64	A 65	B 66	C 67	D 68	E 69	F 70	G 71	“4x
‘11x	H 72	I 73	J 74	K 75	L 76	M 77	N 78	O 79	
‘12x	P 80	Q 81	R 82	S 83	T 84	U 85	V 86	W 87	“5x
‘13x	X 88	Y 89	Z 90	[91	\ 92	] 93	^ 94	_ 95	
‘14x	‘ 96	a 97	b 98	c 99	d 100	e 101	f 102	g 103	“6x
‘15x	h 104	i 105	j 106	k 107	l 108	m 109	n 110	o 111	
‘16x	p 112	q 113	r 114	s 115	t 116	u 117	v 118	w 119	“7x
‘17x	x 120	y 121	z 122	{ 123	| 124	} 125	~ 126	- 127	
‘20x	Ā 128	Ą 129	Ć 130	Č 131	Ď 132	Ě 133	Ę 134	Ğ 135	“8x
‘21x	Ł 136	Ĺ 137	Ł 138	Ń 139	Ň 140	■ 141	Ó 142	Ŕ 143	
‘22x	Ř 144	Ś 145	Š 146	Ş 147	Ť 148	Ŧ 149	Ů 150	Ű 151	“9x
‘23x	Ÿ 152	Ž 153	Ž 154	Ž 155	ı 156	ı 157	đ 158	§ 159	
‘24x	ă 160	ą 161	ć 162	č 163	ď 164	ě 165	ę 166	ğ 167	“Ax
‘25x	í 168	ł 169	ł 170	ń 171	ň 172	■ 173	ó 174	í 175	
‘26x	ř 176	ś 177	š 178	ş 179	ť 180	ŧ 181	ů 182	ű 183	“Bx
‘27x	ÿ 184	ż 185	ž 186	ž 187	ij 188	i 189	ç 190	£ 191	
‘30x	À 192	Á 193	Â 194	Ã 195	Ä 196	Å 197	Æ 198	Ç 199	“Cx
‘31x	È 200	É 201	Ê 202	Ë 203	Ì 204	Í 205	Î 206	Ï 207	
‘32x	Ð 208	Ñ 209	Ò 210	Ó 211	Ô 212	Õ 213	Ö 214	Œ 215	“Dx
‘33x	Ø 216	Ù 217	Ú 218	Û 219	Ü 220	Ý 221	Þ 222	ŠŠ 223	
‘34x	à 224	á 225	â 226	ã 227	ä 228	å 229	æ 230	ç 231	“Ex
‘35x	è 232	é 233	ê 234	ë 235	ì 236	í 237	î 238	ï 239	
‘36x	ð 240	ñ 241	ò 242	ó 243	ô 244	õ 245	ö 246	œ 247	“Fx
‘37x	ø 248	ù 249	ú 250	û 251	ü 252	ý 253	þ 254	ß 255	
	“8	“9	“A	“B	“C	“D	“E	“F	

TeX .tfm font: bchrc8s

Faked small-caps, with adjusted virtual font, mapline entry and special CMap.

Copy bchr8r.tfm renamed as bchr8rs, and build a new virtual font bchrc8s that differs from bchrc8t only in using this bchr8rs for the lower-case letters:

```
(MAPFONT D 0
(FONTNAME bchr8rs)
(FONTCHECKSUM 0 1764027361)
(FONTAT R 0.8)
(FONTSIZE R 10.0)
)
(MAPFONT D 1
(FONTNAME bchr8r)
(FONTCHECKSUM 0 1764027361)
(FONTAT R 1.0)
(FONTSIZE R 10.0)
)
```

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	` 0	' 1	^ 2	~ 3	¨ 4	˘ 5	° 6	ˇ 7	"0x
'01x	˘ 8	˘ 9	˘ 10	˘ 11	˘ 12	˘ 13	< 14	> 15	
'02x	“ 16	” 17	„ 18	« 19	» 20	— 21	— 22	23	"1x
'03x	■ 24	I 25	J 26	FF 27	FI 28	FL 29	FFI 30	FFL 31	
'04x	⌒ 32	! 33	" 34	# 35	\$ 36	% 37	& 38	' 39	"2x
'05x	(40	) 41	* 42	+ 43	, 44	- 45	. 46	/ 47	
'06x	0 48	1 49	2 50	3 51	4 52	5 53	6 54	7 55	"3x
'07x	8 56	9 57	: 58	; 59	< 60	= 61	> 62	? 63	
'10x	@ 64	A 65	B 66	C 67	D 68	E 69	F 70	G 71	"4x
'11x	H 72	I 73	J 74	K 75	L 76	M 77	N 78	O 79	
'12x	P 80	Q 81	R 82	S 83	T 84	U 85	V 86	W 87	"5x
'13x	X 88	Y 89	Z 90	[91	\ 92	] 93	^ 94	_ 95	
'14x	' 96	A 97	B 98	C 99	D 100	E 101	F 102	G 103	"6x
'15x	H 104	I 105	J 106	K 107	L 108	M 109	N 110	O 111	
'16x	P 112	Q 113	R 114	S 115	T 116	U 117	V 118	W 119	"7x
'17x	X 120	Y 121	Z 122	{ 123	| 124	} 125	~ 126	- 127	
'20x	Ă 128	Ȧ 129	Ć 130	Č 131	Ď 132	Ě 133	Ě 134	Ǧ 135	"8x
'21x	Ł 136	Ł 137	Ł 138	Ń 139	Ń 140	■ 141	Ō 142	Ŕ 143	
'22x	Ř 144	Ś 145	Š 146	Ş 147	Ť 148	Ť 149	Ů 150	Ů 151	"9x
'23x	Ÿ 152	Ž 153	Ž 154	Ž 155	IJ 156	İ 157	Đ 158	§ 159	
'24x	Ǻ 160	Ǻ 161	Ć 162	Č 163	Ď 164	Ě 165	Ě 166	Ǧ 167	"Ax
'25x	Ł 168	Ł 169	Ł 170	Ń 171	Ń 172	■ 173	Ō 174	Ŕ 175	
'26x	Ř 176	Ś 177	Š 178	Ş 179	Ť 180	Ť 181	Ů 182	Ů 183	"Bx
'27x	Ÿ 184	Ž 185	Ž 186	Ž 187	IJ 188	İ 189	đ 190	£ 191	
'30x	À 192	Á 193	Â 194	Ã 195	Ä 196	Å 197	Æ 198	Ç 199	"Cx
'31x	È 200	É 201	Ê 202	Ë 203	Ì 204	Í 205	Î 206	Ï 207	
'32x	Ð 208	Ñ 209	Ò 210	Ó 211	Ô 212	Õ 213	Ö 214	Œ 215	"Dx
'33x	Ø 216	Ù 217	Ú 218	Û 219	Ü 220	Ý 221	Þ 222	ŠS 223	
'34x	À 224	Á 225	Â 226	Ã 227	Ä 228	Å 229	Æ 230	Ç 231	"Ex
'35x	È 232	É 233	Ê 234	Ë 235	Ì 236	Í 237	Î 238	Ï 239	
'36x	Ð 240	Ñ 241	Ò 242	Ó 243	Ô 244	Õ 245	Ö 246	Œ 247	"Fx
'37x	Ø 248	Ù 249	Ú 250	Û 251	Ü 252	Ý 253	Þ 254	ŠS 255	
	"8	"9	"A	"B	"C	"D	"E	"F	

Provide a mapline: (copied from that for bchr8r)

```
\pdfmapline{= bchr8rs CharterBT-Roman " TeXBase1Encoding ReEncodeFont " <8r.enc <bchr8a.pfb}
```

or for Xe_{La}TeX:

```
\special{pdf:mapline bchr8rs 8sc.enc bchr8a.pfb -u T1-sc.cmap}
```

and also provide a CMap file T1-sc.cmap that maps all upper-case letters to lowercase ones; (that is, the conceptual reverse of what choosing small-caps achieves.) The encoding file 8sc.enc is just a renamed copy of 8r.enc. It is needed with Xe_{La}TeX to ensure getting two font instances, which can then have different CMap files.

```
TEX.tfm font: bchrc8s
Faked small-caps, with adjusted virtual font, mapline entry and special CMap.
'0'1'2'3'4'5'6'7
'00x 0'1'2'3'4'5'6'7
"0x
'01x~8'9'10,11,12,13<14>15
'02x"16"17",18«19»20-21—2223
"1x not dotless
'03x24i25j26ff27fi28fl29ffi30ffl31
'04x32!33"34#35$36%37&38'39
"2x
'05x(40)41*42+43,44-45.46/47
'06x048149250351452553654755
"3x
'07x856957:58;59<60=61>62?63
'10x@64A65B66C67D68E69F70G71
"4x
'11xH72I73J74K75L76M77N78O79
'12xP80Q81R82S83T84U85V86W87
"5x
'13xX88Y89Z90[91\92]93^94_95
'14x'96a97b98c99d100e101f102g103
"6x lowercase letters, from the CMap
'15xh104i105j106k107l108m109n110o111
'16xp112q113r114s115t116u117v118w119
"7x
'17xx120y121z122{123|124}125~126-127
'20xÅ
128À129Ć combining accents coming after the base
130Č
131Ď
132Ě
133Ě134Ě
135
"8x not an accent
'21xĹ136L'137Ł138Ń
139Ń
140141Ō142Ř
143
'22xŘ
144Š
145Š146Š147Ť
148Ť149Ů
150Ů
151
"9x
'23xŸ152Ž
153Ž154Ž decomposed ligature
155IJ156I
157ø158š159
'24xä combining accents after lower-case letters
160ą161ć
162ċ wrong letter
163đ not an accent
164ě
```

Now the uppercase glyphs from the bchr8rs instance of the bchr8a font are mapped to lower-case letters using T1-sc.cmap. The uppercase glyphs from the bchr8r instance of the same font just copy as normal.

TeX .tfm font: bchrc8sx

Faked small-caps, also with /ActualText \special commands, built-in to the virtual font.

To fix up the other issues, on a per-character basis, we construct another virtual font. This surrounds each problematic character with DVI special commands¹, using the Hexadecimal code for the desired Unicode point; e.g.,

```
(MAP
  (SPECIAL pdf:direct:/Span<</ActualText<FEFF013D>>>BDC)
  ...
  (SPECIAL pdf:direct:EMC)
)
```

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	` 0	' 1	^ 2	~ 3	¨ 4	˘ 5	° 6	ˇ 7	"0x
'01x	˘ 8	˘ 9	˙ 10	˚ 11	˛ 12	˜ 13	◁ 14	▷ 15	
'02x	“ 16	” 17	„ 18	« 19	» 20	— 21	— 22	23	"1x
'03x	■ 24	I 25	J 26	FF 27	FI 28	FL 29	FFI 30	FFL 31	
'04x	␣ 32	! 33	" 34	# 35	\$ 36	% 37	& 38	' 39	"2x
'05x	(40	) 41	* 42	+ 43	, 44	- 45	. 46	/ 47	
'06x	0 48	1 49	2 50	3 51	4 52	5 53	6 54	7 55	"3x
'07x	8 56	9 57	: 58	; 59	< 60	= 61	> 62	? 63	
'10x	@ 64	A 65	B 66	C 67	D 68	E 69	F 70	G 71	"4x
'11x	H 72	I 73	J 74	K 75	L 76	M 77	N 78	O 79	
'12x	P 80	Q 81	R 82	S 83	T 84	U 85	V 86	W 87	"5x
'13x	X 88	Y 89	Z 90	[91	\ 92	] 93	^ 94	_ 95	
'14x	' 96	A 97	B 98	C 99	D 100	E 101	F 102	G 103	"6x
'15x	H 104	I 105	J 106	K 107	L 108	M 109	N 110	O 111	
'16x	P 112	Q 113	R 114	S 115	T 116	U 117	V 118	W 119	"7x
'17x	X 120	Y 121	Z 122	{ 123	| 124	} 125	~ 126	- 127	
'20x	Ă 128	Ą 129	Ć 130	Č 131	Ď 132	Ě 133	Ę 134	Ğ 135	"8x
'21x	Í 136	Ĺ 137	Ł 138	Ń 139	Ň 140	■ 141	Ŏ 142	Ŕ 143	
'22x	Ř 144	Ś 145	Š 146	Ş 147	Ť 148	Ŧ 149	Ů 150	Ű 151	"9x
'23x	Ÿ 152	Ż 153	Ž 154	Ž 155	IJ 156	İ 157	Ð 158	§ 159	
'24x	Ă 160	Ą 161	Ć 162	Č 163	Ď 164	Ě 165	Ę 166	Ğ 167	"Ax
'25x	Í 168	Ĺ 169	Ł 170	Ń 171	Ň 172	■ 173	Ŏ 174	Ŕ 175	
'26x	Ř 176	Ś 177	Š 178	Ş 179	Ť 180	Ŧ 181	Ů 182	Ű 183	"Bx
'27x	Ÿ 184	Ż 185	Ž 186	Ž 187	IJ 188	ı 189	ı 190	£ 191	
'30x	À 192	Á 193	Â 194	Ã 195	Ä 196	Å 197	Æ 198	Ç 199	"Cx
'31x	È 200	É 201	Ê 202	Ë 203	Ì 204	Í 205	Î 206	Ï 207	
'32x	Ð 208	Ñ 209	Ò 210	Ó 211	Ô 212	Õ 213	Ö 214	Œ 215	"Dx
'33x	Ø 216	Ù 217	Ú 218	Û 219	Ü 220	Ý 221	Þ 222	ŠS 223	
'34x	À 224	Á 225	Â 226	Ã 227	Ä 228	Å 229	Æ 230	Ç 231	"Ex
'35x	È 232	É 233	Ê 234	Ë 235	Ì 236	Í 237	Î 238	Ï 239	
'36x	Ð 240	Ñ 241	Ò 242	Ó 243	Ô 244	Õ 245	Ö 246	Œ 247	"Fx
'37x	Ø 248	Ù 249	Ú 250	Û 251	Ü 252	Ý 253	Þ 254	ŠS 255	
	"8	"9	"A	"B	"C	"D	"E	"F	

¹Due to Lars Hellström, from a comment on the fontinst mailing list, November 2011.

```

'0'1'2'3'4'5'6'7
'00x 0'1'2'3'4'5'6'7
'0x
'01x 8'9'10,11,12,13<14>15
'02x "16"17,,18«19»20-21—2223
'1x correct dotless characters
'03x 24ı25ı26ff27fi28fl29ffi30ffl31
'04x 32!33"34#35$36%37&38'39
'2x
'05x (40)41*42+43,44-45.46/47
'06x 048149250351452553654755
'3x
'07x 856957:58;59<60=61>62?63
'10x @64A65B66C67D68E69F70G71
'4x
'11x H72I73J74K75L76M77N78O79
'12x P80Q81R82S83T84U85V86W87
'5x
'13x X88Y89Z90[91\92]93^94_95
'14x '96a97b98c99d100e101f102g103
'6x
'15x h104i105j106k107l108m109n110o111
'16x p112q113r114s115t116u117v118w119
'7x
'17x x120y121z122{123|124}125~126127
'20x Å128Ą129Ć130Č131Đ132Ě133Ę134Ǧ135
'8x no linebreaks after accented uppercase letters!
'21x Ĺ136Ł137Ł138Ń139Ň140Ł141Ŏ142Ŕ143
'22x Ŗ144Ś145Ŝ146Ş147Ţ148Ť149Ū150Ŭ151
'9x IJ-ligature correct dmacron
'23x Ÿ152Ž153Ž154Ž155IJ156İ157đ158Ş159
'24x ä160ą161ć162č163ď164ě165ę166ğ167
'Ax correct Lcaron, lcaron, tcaron
'25x Í168Ĭ169Ĳ170ń171ņ172ŕ173ŝ174ř175
'26x ř176ś177ś178ş179ť180ţ181ú182ů183
'Bx ij-ligature
'27x ŷ184ž185ž186ž187ij188ı189ı190£191
'30x Å192Á193Ă194Ă195Ă196Ă197Æ198Ç199
'Cx
'31x È200É201Ê202Ë203Ì204Í205Î206Ï207
'32x Ñ208Ń209Ò210Ó211Ô212Õ213Ö214OE215
'Dx
'33x Ø216Ù217Ú218Û219Ü220Ý221Þ222SS223
'34x à224á225â226ã227ä228å229æ230ç231
'Ex
'35x è232é233ê234ë235ì236í237î238ï239
'36x ð240ñ241ò242ó243ô244õ245ö246oe247
'Fx edth, capitalises the same as dcaron
'37x ø248ù249ú250û251ü252ý253þ254ss255
'8'9'A'B'C'D'E'F
|
(CHARACTER 0 211 (COMMENT Lcaron )
(CHARWD R 0.57098)
(CHARHT R 0.698999)
(MAP
(SPECIAL pdf:direct:/Span<</ActualText<FEFF013D>>>BDC)
(MOVERIGHT R 0.025)
(SELECTFONT D 1)
(SETCHAR C L)
(MOVERIGHT R -0.2)
(SETCHAR 0 47)
(MOVERIGHT R 0.025)
(SPECIAL pdf:direct:EMC)
)
)
...
(CHARACTER 0 234 (COMMENT IJ )
(CHARWD R 0.86798)
(CHARHT R 0.665)
(CHARDP R 0.014)
(COMMENT
(KRN C A R -0.037)
(KRN 0 305 R -0.037)
...
(KRN 0 343 R -0.033)
)
(MAP
(SPECIAL pdf:direct:/Span<</ActualText<FEFF0132>>>BDC)
(MOVERIGHT R 0.025)
(SELECTFONT D 1)
(SETCHAR C I)
(MOVERIGHT R 0.05)
(SETCHAR C J)
(MOVERIGHT R 0.025)
(SPECIAL pdf:direct:EMC)
)
)
...
(CHARACTER 0 236 (COMMENT dcroat, dmacron, dstroke)
(CHARWD R 0.60399)
(CHARHT R 0.5545)
(COMMENT
(KRN 0 55 R 0.033)
(KRN C A R -0.017)
...
)
(MAP
(SPECIAL pdf:direct:/Span<</ActualText<FEFF0111>>>BDC)
(MOVERIGHT R 0.025)
(SETCHAR 0 320)
(MOVERIGHT R 0.025)
(SPECIAL pdf:direct:EMC)
)
)
)

```

Because the start of the tagging /Span<< ... >> BDC, and its end with EMC, occurs inside the virtual font for each character, it does not interfere with the calculations done by T_EX to determine exactly where it should be placed. Also, kerning information is retained and used. It is only much later as the PDF file is being built that this content tagging with /ActualText replacement is encountered and merged into the content stream.

Unfortunately, these commands (SPECIAL pdf:direct: ...) used inside the virtual font are not understood by X_YT_EX (or rather, by its dvipdfmx back-end driver). So we can make new virtual fonts that behave perfectly for Copy/Paste when used with pdfT_EX, but not with X_YT_EX.

TeX .tfm font: bchrc8tx

Here is another T1-encoded small-caps font, using /ActualText \specials as commands with most accented letters, but with accents coming first.

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	` 0	' 1	^ 2	~ 3	¨ 4	˘ 5	° 6	ˇ 7	"0x
'01x	˘ 8	˘ 9	˙ 10	˙ 11	˙ 12	˙ 13	˙ 14	˙ 15	
'02x	“ 16	” 17	„ 18	« 19	» 20	— 21	— 22	23	"1x
'03x	■ 24	I 25	J 26	FF 27	FI 28	FL 29	FFI 30	FFL 31	
'04x	⌞ 32	! 33	" 34	# 35	\$ 36	% 37	& 38	' 39	"2x
'05x	(40	) 41	* 42	+ 43	, 44	- 45	. 46	/ 47	
'06x	0 48	1 49	2 50	3 51	4 52	5 53	6 54	7 55	"3x
'07x	8 56	9 57	: 58	; 59	< 60	= 61	> 62	? 63	
'10x	@ 64	A 65	B 66	C 67	D 68	E 69	F 70	G 71	"4x
'11x	H 72	I 73	J 74	K 75	L 76	M 77	N 78	O 79	
'12x	P 80	Q 81	R 82	S 83	T 84	U 85	V 86	W 87	"5x
'13x	X 88	Y 89	Z 90	[91	\ 92	] 93	^ 94	_ 95	
'14x	' 96	A 97	B 98	C 99	D 100	E 101	F 102	G 103	"6x
'15x	H 104	I 105	J 106	K 107	L 108	M 109	N 110	O 111	
'16x	P 112	Q 113	R 114	S 115	T 116	U 117	V 118	W 119	"7x
'17x	X 120	Y 121	Z 122	{ 123	| 124	} 125	~ 126	- 127	
'20x	Ă 128	Ą 129	Ć 130	Č 131	Ď 132	Ě 133	Ę 134	Ğ 135	"8x
'21x	Ł 136	Ł 137	Ł 138	Ń 139	Ń 140	■ 141	Ó 142	Ŕ 143	
'22x	Ř 144	Ś 145	Š 146	Ş 147	Ť 148	Ţ 149	Ů 150	Ű 151	"9x
'23x	Ÿ 152	Ž 153	Ž 154	Ž 155	IJ 156	İ 157	Đ 158	Ş 159	
'24x	Ă 160	Ą 161	Ć 162	Č 163	Ď 164	Ě 165	Ę 166	Ğ 167	"Ax
'25x	Ł 168	Ł 169	Ł 170	Ń 171	Ń 172	■ 173	Ó 174	Ŕ 175	
'26x	Ř 176	Ś 177	Š 178	Ş 179	Ť 180	Ţ 181	Ů 182	Ű 183	"Bx
'27x	Ÿ 184	Ž 185	Ž 186	Ž 187	IJ 188	ı 189	ı 190	£ 191	
'30x	À 192	Á 193	Â 194	Ã 195	Ä 196	Å 197	Æ 198	Ç 199	"Cx
'31x	È 200	É 201	Ê 202	Ë 203	Ì 204	Í 205	Î 206	Ï 207	
'32x	Ð 208	Ñ 209	Ò 210	Ó 211	Ô 212	Õ 213	Ö 214	Œ 215	"Dx
'33x	Ø 216	Ù 217	Ú 218	Û 219	Ü 220	Ý 221	Þ 222	ŠS 223	
'34x	À 224	Á 225	Â 226	Ã 227	Ä 228	Å 229	Æ 230	Ç 231	"Ex
'35x	È 232	É 233	Ê 234	Ë 235	Ì 236	Í 237	Î 238	Ï 239	
'36x	Ð 240	Ñ 241	Ò 242	Ó 243	Ô 244	Õ 245	Ö 246	Œ 247	"Fx
'37x	Ø 248	Ù 249	Ú 250	Û 251	Ü 252	Ý 253	Þ 254	ŠS 255	
	"8	"9	"A	"B	"C	"D	"E	"F	