A

Fontname

K. Berry

1 Introduction

This is Fontname 2.1, a naming scheme for (the base part of) external TeX font filenames. This makes at most eight-character names from (almost) arbitrarily complex font names, thus helping portability of TeX documents. We point out some shortcomings of the scheme, and ways of dealing with them.

Please send additions, corrections, or other comments to me at `kb@mail.tug.org`, or to the mailing list 'tex-fonts@mail.tug.org'. Email 'tex-fonts-request@mail.tug.org' to join the list.

Besides this document, the Fontname distribution includes various encoding files, mapping files, and utilities. See the file 'README' for details. You can retrieve the most up-to-date version of these lists by anonymous ftp as 'ftp://ftp.tug.org/tex/fontname'. This directory is mirrored on all CTAN hosts ('ftp.dante.de', 'ftp.tex.ac.uk', and their mirrors, such as 'ftp.cdrom.com') in the directory 'tex-archive/doc/fontname'. For a list of CTAN mirrors, finger 'ctan@ftp.tug.org'.

This document is uncopyrighted and may be used freely.

1.1 History

The original inspiration for Fontname was Frank Mittelbach and Rainer Schoepf's article in *TUGboat* 11(2) (June 1990), which led to my article in *TUGboat* 11(4) (November 1990), pages 512–519. Mittelbach wrote another article criticizing the scheme below in *TUGboat* 13(1) (April 1992), pages 51–53; most of his points are well-taken, but I saw no alternative then, and see no alternative now. Others of his points are addressed in the appropriate sections below.

In August 1995, Fontname version 2 was released, concomitantly with a new release of the PostScript fonts for use with LaTeX and Dvips. After several years of experience, several modifications of the original distribution seemed desirable: more precise specification of encodings (see Section 2.4 [Variants], page 15); machine-readable mapping files (the '*.map' files in the distribution) and standardizing directory names as well as font filenames (included in 'supplier.map' and 'typeface.map').

In Fontname version 1, some encoding variant characters ('0', '2', etc.) have been reassigned to a '7' or '8' sequence (see Section 2.4 [Variants], page 15). Although this is an incompatible change, the advantages of (1) consistency in naming encoding variants, and (2) having some free variants makes it worthwhile. Also, not so coincidentally, new metrics for PostScript fonts in the Cork encoding were issued—same encoding, different metrics. So a new name served a practical purpose as well.

Many people have contributed to this work. In particular, I gratefully acknowledge Nelson Beebe, Barbara Beeton, Rocky Bernstein, Thierry Bouche, Damian Cugley, Berthold K.P. Horn, Alan Jeffrey, Russell Lang, Pierre MacKay, Sebastian Rahtz, Jean Rivlin, and Tom Rokicki.

1.2 References

Related files and distributions:

- The TeX Directory Structure (TDS) standard, available from ('`ftp://ftp.tug.org/tex/tds`' and '*CTAN:*`/tds`') specifies a directory tree for all TeX library files. The directory names given in Section 2.1 [Suppliers], page 3 and Section 2.2 [Typefaces], page 4 are intended to mesh with that standard.

- The '`modes.mf`' file ('`ftp://ftp.tug.org/tex/modes.mf`') contains recommended mode names to use as directory names.

- The PSfonts distribution ('*CTAN:*`/fonts/psfonts`') contains TeX support for many fonts, both commercially available and free.

- The Fontinst distribution ('*CTAN:*`/fonts/utilities/psfonts`') supports quite general creation of virtual fonts, named according to the scheme given here.

- The Dvips translator (original from '`ftp://labrea.stanford.edu/pub/dvips*.tar.gz`' and variation from '`ftp://ftp.cs.umb.edu/pub/tex/dvipsk.tar.gz`') supports resident and downloadable PostScript fonts. Dvips was the first real application of Fontname 1. Dvips also includes Afm2tfm, another program that can create virtual fonts.

- The Dviljk processor ('`ftp://ftp.cs.umb.edu/pub/tex/dviljk.tar.gz`') contains TeX support for the fonts built into the LaserJet 4.

- 'Designing New Typefaces with Metafont', by Richard Southall, Stanford Computer Science Department Technical Report STAN-CS-85-1074, September 1985, for a comprehensive terminology of font design.

2 Filenames for fonts

We must limit ourselves to eight character names, for compatibility with DOS filesystems and the ISO 9660 standard used for CD-ROM distribution. Names may consist of only the letters (monocase a-z), numerals (0-9), and underscore.

Here is the basic division of the eight characters (the spaces here are merely for readability):

> *S TT W [V...] [N] [E] [DD]*

where

S   represents the supplier of the font.

TT   represents the typeface name.

W   represents the weight.

V...   represents the variant(s), and is omitted if both it and the width are normal. Many fonts have more than one variant.

N   represents the encoding, and is omitted if the encoding is nonstandard. Encodings are subsumed in the section on variants (see).

E   represents the width ("expansion"), and is omitted if it is normal.

DD   represents the design size (in decimal), and is omitted if the font is linearly scaled. Mittelbach in *TUGboat* 13(1) proposes using hexadecimal or base-36 notation. I don't think the increased range makes up for the unreadability of the common sizes (e.g., 10 pt fonts would have a suffix 'a' (in hex), or 'j' (in base 36)).

The weight, variants, and width are probably all best taken from the original name of the font, instead of trying to relate them to some external standard.

2.1 Suppliers

The *supplier* is the source of a font, typically a (digital) type foundry.

You should use the supplier letter which matches the supplier you obtained the font from, not the original source; for example, Avant Garde was designed by Herb Lubalin for ITC, but Adobe also sells it. The name of the font that you get from Adobe should start with 'p'. This is because font resellers typically make modifications to the original design.

Notes on specific suppliers:

'f'   For fonts that are distributed without any specific attribution to the creator, by individuals, or by small foundries. (Unfortunately, we don't have enough characters to assign one to every font supplier in the world.)

'r'   obsolete; specifies raw fonts, in the old distribution of Dvips. New fonts should never use 'r'. (The right thing to do is specify the correct encoding, variant, or whatever the font's characteristics actually are.)

'z'   for fonts that just don't fit well into the naming scheme. The 'z' should be
             followed by the real supplier letter.

Here is the table from the file 'supplier.map'. It is organized alphabetically by abbreviation. Each line consists of an abbreviation, directory name, and comment.

```
9 unknown
a autologi      Autologic
b bitstrea      Bitstream
c cg            Compugraphic
d dtc           Digital Typeface Corporation
e apple         Apple
f public        small foundries
g gnu           Free Software Foundation
h bh            Bigelow & Holmes
i itc           International Typeface Corporation
k softkey       SoftKey
l linotype      Linotype
m monotype      Monotype
n ibm           IBM
o corel         Corel
p adobe         Adobe ('p' for PostScript)
r -             raw (for [obsolete] use with virtual fonts)
s sun           Sun
t paragrap      ParaGraph
u urw           URW
z -             bizarre (fontname is nonstandard)
- jknappen      Joerg Knappen
```

2.2 Typefaces

For our purposes, a *typeface* is a collection of related fonts.

We sometimes use the same typeface abbreviation for fonts with different supplier names, where we know (usually by inspection) that the fonts truly are the same. This helps conserve abbreviations.

Notes on specific typefaces:

'ad'
'gm'   To explain a common confusion: 'ad' is Adobe Garamond (with a 'FontName' of
             'AGaramond'). This is quite different from the 'Garamond' typeface distributed
             by Adobe, which is actually ITC Garamond. (Garamond No. 3 ('f3'), Simoncini
             Garamond ('ig'), and Stempel Garamond ('eg') are still other variations on the
             Garamond theme.)

'`lh`'
'`ls`'
'`lx`'
'`r1`'   These abbreviations for Lucida typeface subfamilies, et al., solve a problem with names getting too long, or help conserve variant abbreviations. See Section 2.4 [Variants], page 15. Ideally, they would not exist.

'`ns`'
'`nt`'
'`tm`'   Suppliers like to offer as many variations on the Times New Roman design as they do Garamond. Adobe has '`Times`', '`TimesNewRoman`', and '`TimesNewRomanPS`'. Although this last has been used by other foundries (e.g., Monotype) for a Times variation exactly compatible with Adobe's '`Times`', Adobe itself also offers it, so we must have abbreviations for all three.

'`pi`'   For pi fonts. Since names of pi fonts are rather arbitrary, it is not useful to try to assign typeface abbreviations to all of them. Instead, we use the supplier letter, '`pi`', an arbitarily-assigned three-digit number, a weight and (if necessary) a variant. For example, '`mpi001r`'. Pi font '`001`' for one supplier has nothing to do with pi font '`001`' for another.

Here is the table, from the file '`typeface.map`'. It is organized alphabetically by abbreviation. Each line consists of an abbreviation and directory name, possibly followed by PostScript '`FontName`'s and/or a comment in roman. The '`FontName`' may be preceded by a letter *s* and a '`:`', as in '`b:Dutch`'. In that case, the *s* is a supplier abbreviation, and we've used that abbreviation for the given '`FontName`' from that supplier.

```
a1 arial        Arial
a2 amasis       Amasis
a3 adlib        AdLib
a4 altgoth2     AlternateGothicNo2
a5 allegro      Allegro
a6 amelia       Amelia
a7 amertext     AmericanText
a8 aurora       Aurora
a9 adsans       Adsans b:Humanist970BT
aa aachen       Aachen
ab aboeckli     ArnoldBoecklin
ac acaslon      ACaslon                                    Adobe Caslon
ad agaramon     AGaramond                                  Adobe Garamond
ag avantgar     AvantGarde m:MAvantGardeGothicPS u:URWGothicL
ah ashleysc     AshleyScript
ai abadi        Abadi
al albertus     Albertus b:Flareserif821BT
am amercana     Americana b:Americana
an anna         Anna
ao atqolive     AntiqueOlive b:Incised901BT
ap apollo       Apollo
```

```
aq antiqua      Antiqua u:URWAntiqua m:BookAntiqua
ar arcadia      Arcadia
as aldus        Aldus
at atypewri     AmericanTypewriter
au auriol       Auriol b:Freeform721
av avenir       Avenir
az azdzgrot     AkzidenzGrotesk b:Gothic725BT
b0 blackoak     Blackoak
b1 blado        Blado
b2 binnyos      BinnyOldStyle
b3 braggado     Braggadocio
b4 bison        Bison b:Brush738BT
b5 binghams     BinghamScript b:Freehand591BT
b6 block        Block b:Gothic821
b7 bernhard     Bernhard BernhardModern
b8 blippo       Blippo
b9 bremen       Bremen
bb bembo        Bembo b:Aldine401BT
bc banco        Banco
bd bodoni       Bodoni
be bell         Bell
bf biffo        Biffo
bg benguiat     Benguiat
bh bauhaus      Bauhaus
bi birch        Birch
bk bookman      Bookman m:MBookmanPS u:URWBookmanL
bl belwe        Belwe
bm bulmer       Bulmer
bn bernard      Bernard
bo balloon      Balloon
bp bodocamp     BodoniCampanile b:Modern735
br berling      Berling b:Revival565BT
bs bakersig     BakerSignet
bt boton        Boton
bu brush        Brush
bv baskervi     Baskerville
bw broadway     Broadway
by berkeley     Berkeley
c0 carolina     Carolina
c1 calisto      Calisto
c2 casln224     CaslonTwoTwentyFour
c3 caslon3      CaslonThree
c4 chicago      Chicago
c5 casln540     CaslonFiveForty
c6 clarion      Clarion
c7 compacta     Compacta
c8 calvert      Calvert
c9 codex        Codex b:Calligraphic421BT
```

```
ca caslon       Caslon
cb cooper       Cooper
cc cascade      Cascade b:Freehand471BT
cd clarendo     Clarendon
ce centenni     Centennial
cf clearfac     Clearface
cg charlema     Charlemagne
ch charter      Charter
ci candida      Candida
cl cloister     Cloister
cm cm           Computer Modern
cn century      Century
co cochin       Cochin
cp copperpl     Copperplate
cq cheq         Cheq
cr courier      Courier m:MCourierPS m:CourierTwelveMT u:NumbusMonL
cs cntursbk     CenturySchoolbook
ct cheltenh     Cheltenham
cu centuros     CenturyOldStyle
cv clairvx      Clairvaux
cw cottonwd     Cottonwood
cx caxton       Caxton
cy city         City b:SquareSlabserif711BT
cz choc         Choc b:Staccato555BT
d0 davida       DavidaBold
dc domcasl      Dom DomCasual DomDiagonal
dd ducberry     DucDeBerry
de dellarob     DellaRobbia
di diotima      Diotima b:Calligraphic810BT
dl dolores      Dolores
dm delima       Delima
dr doric        Doric
ds dorchesc     DorchesterScript
dt dante        Dante
e0 embassy      Embassy
e1 empire       Empire
ea lectra       Electra b:Transitional521BT
eb baskerbe     BaskervilleBE
ec applecha     e:AppleChancery
ee egyptian     Egyptian EgyptianExtended
ef egyptien     EgyptienneF
eg stgaramo     StempelGaramond b:OriginalGaramondBT
eh engsft       Engschrift
ei esprit       Esprit
ek eckmann      Eckmann b:Freeform710
el ellingtn     Ellington
en engraver     Engravers
eo amerigo      Amerigo b:AmerigoBT
```

```
er eras          Eras
es eurostil      Eurostile b:Square721BT k:Minima
et ehrhardt      Ehrhardt
eu euler         Euler
ex exclsior      Excelsior
f0 flemishs      FlemishScript
f1 fournier      Fournier
f2 facade        Facade
f3 festival      Festival
f4 footligh      Footlight
f5 french        French
fa formata       Formata
fe forte         Forte
ff fairfld       Fairfield b:Transitional551BT
fg frankgth      FranklinGothic
fi figaro        Figaro
fl flora         Flora
fn fenice        Fenice
fo folio         Folio
fq frizquad      FrizQuadrata
fr frutiger      Frutiger b:Humanist777BT
fs falstaff      Falstaff
ft fettefrk      FetteFraktur Fraktur
fu futura        Futura
fx felixttl      FelixTitling
fy flyer         Flyer
g0 gando         Gando
g1 gothic13      GothicThirteen
g2 giddyup       Giddyup
g3 garamon3      GaramondThree b:AmercianGaramondBT      Garamond No. 3
g4 gymodern      GoudyModern
g5 gycatalg      GoudyCatalogue
g6 gorilla       GorillaITC
g9 ugaramon      GaramondRetrospective
gb gothicbb      GothicBBB
ge geneva        e:Geneva
gg garthgra      GarthGraphic
gj granjon       Granjon b:ElegantGaramondBT
gl galliard      Galliard
gm garamond      Garamond
go gyoldsty      GoudyOldStyle
gp glypha        Glypha
gq grotesq       Grotesque u:URWGrotesk
gr gloucest      Gloucester
gs gillsans      GillSans m:GillAltOneMT b:Humanist521BT
gt goudytxt      GoudyText
gu guardi        Guardi
gv giovanni      Giovanni
```

```
gy goudy        Goudy
h0 handelgo     HandelGothic
hb hobo         Hobo Tramp
hc herculnm     Herculanum
hd headline     Headline
hg hiroshig     Hiroshige
hi hvinsera     HelveticaInserat b:Swiss921BT
hm charme       Charme
hn hvneue       HelveticaNeue
ho horleyos     HorleyOldStyle
hr hvround      HelveticaRounded
hs hnseati      Hanseatic B:Swiss924BT
ht hoeflert     e:HoeflerText
hv helvetic     Helvetica u:NimbusSans u:NumbusSanL b:Swiss721BT b:Monospace821BT b:Sw
hw schadow      Schadow
hx huxleyvr     HuxleyVertical
i0 commscr      CommercialScript
i1 impress      Impress
i2 impuls       Impuls
ia insignia     Insignia
ib ibycus       Ibycus
ic impact       Impact
if inflex       Inflex
ig scgaramo     SimonciniGaramond b:ItalianGaramond
ii imprint      Imprint
il caecilia     Caecilia
im imago        Imago
in industri     Industria
io ionic        Ionic b:News701BT
ip impressm     Impressum
is italnos      ItalianOldStyle
it italia       Italia
iw ironwood     Ironwood
iy iowanold     IowanOldStyle
jf jeffersn     Jefferson b:Freehand575BT
jn janson       Janson
jo joanna       Joanna
jp juniper      Juniper
kb kabel        Kabel
kg bankgoth     BankGothic
kl klang        Klang
kn kino         Kino
ko bookmano     BookmanOldStyle
kr korinna      Korinna
ks kuenstsc     KuenstlerScript
ku kaufmann     Kaufmann
l1 liberty      Liberty
l2 libra        Libra
```

```
l3 lucia        Lucia
l4 lucian       Lucian
lb lubaling     LubalinGraph
lc lucida       Lucida
lf life         Life
lg lettrgth     LetterGothic ISILGothic
lh lubright     LucidaBright
li latin        Latin
ln lino         Lino
lo lithos       Lithos
ls lucsans      LucidaSans
lt lutetia      Lutetia
lw leawood      Leawood
lx lucidfax     LucidaFax
ly lydian       Lydian
m0 monospac     Monospace
m1 monolisc     MonolineScript
m2 metro        Metro b:Geometric415BT
m3 mirarae      Mirareae
m4 mrearl       MisterEarl
m5 murrayhl     MurrayHill
m6 mittlsft     Mittelschrift
m7 matura       Matura
m8 monotyos     MonotypeOldStyle
ma mandate      Mandate b:Freehand521BT
mc monaco       e:Monaco
md meridien     Meridien
me mercursc     MercuriusScript
mg marigold     Marigold
mh machine      Machine
mi medici       Medici
ml melior       Melior b:ZapfElliptical711BT
mn minion       Minion
mo modern       Modern b:Modern20BT
mp memphis      Memphis b:GeometricSlab703BT
mq mesquite     Mesquite
mr madrone      Madrone
ms mistral      Mistral b:Staccato222BT
mt minister     Minister
mv malvern      Malvern
mx maximus      Maximus
mz amazone      Amazone
n0 normande     Normande
n1 binner       Binner
na newaster     NewAster
nb nbaskerv     NewBaskerville
nc ncntrsbk     NewCenturySchlbk u:CenturySchL
nd ncaledon     NewCaledonia
```

```
nf nofret       Nofret
ng newsgth      NewsGothic
ni nimrod       Nimrod
nk neograph     Neographik
nl neuland      Neuland b:Informal011BT
nm nimbus       Nimbus
nn nclarend     NewClarendon
np nsplanti     NewsPlantin
nr nberolin     NewBerolina
ns timesnps     TimesNewRomanPS
nt timesnew     TimesNewRoman m:TimesNR n:SonoranSerif
nu nuptial      Nuptial
nv novarese     Novarese
nz neuzeits     NeuzeitS b:Geometric706BT
o0 oldreadf     OldDreadfulNo7
o1 oranda       Oranda
o2 orbitb       OrbitB
o3 colonna      Colonna
o4 oceansan     OceanSans
o7 oldsty7      OldStyleSeven
oa ocra         OCR-A
ob ocrb         OCR-B
oc concorde     Concorde
oe oldengli     OldEnglish b:English157
oi ondine       Ondine Mermaid b:FormalScript421BT
ol colmcill     Colmcille
om omnia        Omnia
on corona       Corona
op optima       Optima d:Optimum b:ZapfHumanist601BT Omega
or orator       Orator
os oldstyle     OldStyle
ot coronet      Coronet b:Ribbon131BT
ov octavian     Octavian
ox onyx         Onyx
oy olympian     Olympian l:OlympicLH
oz ozhandcr     OzHandicraft
p0 poplar       Poplar
p1 palacesc     PalaceScript
p2 pepita       Pepita
p3 palette      Palette b:Brush445BT
p4 pioneer      PioneerITC
p5 piranesi     Piranesi
p6 blueprin     Blueprint
pa parkave      ParkAvenue
pb ptbarnum     PtBarnum
pc poetica      PoeticaChancery s:Scriptoria
pd placard      Placard
pe prestige     PrestigeElite
```

```
pf profile      Profile Profil b:Decorated035BT
pg peignot      Peignot b:Exotic350BT
ph photina      Photina
pi pi           pi fonts—see text and '*.map' files
pl palatino     Palatino d:Palton b:ZapfCalligraphic801BT u:URWPalladioL Palmspring k:
pn plantin      Plantin b:Aldine721BT
po ponderos     Ponderosa
pp perpetua     Perpetua b:Lapidary333BT
pq postatqa     PostAntiqua
ps parisian     Parisian
pt present      Present
pu popplaud     PopplLaudatio
pw perrywoo     Perrywood
px popplpfx     PopplPontifex
py playbill     Playbill
pz poliphil     Poliphilus
qr quorum       Quorum
qt boulevar     Boulevard
r0 romana       Romana
r1 rotis        RotisSemi
r2 cantoria     Cantoria
ra raleigh      Raleigh
ro rotis        Rotis
rm carmina      Carmina
rp reporter     Reporter
rq russelsq     RussellSquare
rs arrus        Arrus
rt carta        Carta
ru runic        Runic
rv revue        Revue
rw rockwell     Rockwell Slate b:GeometricSlab712BT
ry ryumin       Ryumin
s0 sanmarco     SanMarco
s1 scotchro     ScotchRoman
s2 script       Script
s3 seagull      Seagull
s4 shotgun      Shotgun ShotgunBlanks
s5 snell        Snell
s6 stuyvesa     Stuyvesant
s7 sassoon      Sassoon
sb sabon        Sabon b:ClassicalGaramondBT
sc slimbach     Slimbach
sf serifa       Serifa
sg serifgth     SerifGothic
sh shannon      Shannon
sk skia         e:Skia
sl stencil      Stencil
sm spectrum     Spectrum
```

```
sn spartan     Spartan
so sonata      Sonata
sp serpenti    Serpentine
sr snellrnd    SnellRoundhand
ss stschnei    StempelSchneidler
st stone       Stone
sv souvenir    Souvenir
sw swing       Swing
sx syntax      Syntax
sy symbol      Symbol m:MSymbolPS u:StandardSymL
t0 tango       Tango
t1 thunderb    Thunderbird
t2 typo        TypoUpright
tb bebodoni    BBodoni                                      Berthold Bodoni
te timeseur    TimesEuropa
tf tiffany     Tiffany
tg tradegth    TradeGothic
ti techphon    TechPhonetic
tj trajan      Trajan
tk tekton      Tekton
tl castella    Castellar
tm times       Times u:NimbusRoman u:NimbusRomNo9L b:Dutch801BT
to torino      Torino b:Industrial736BT
tp tempo       Tempo
tv trumpmed    TrumpMediaeval b:Kuenstler480BT
tw twentyc     TwentiethCentury
ty typewrit    Typewriter
u0 columbus    Columbus
ub babodoni    BauerBodoni
ug bengugth    BenguiatGothic
uh cushing     Cushing
ul universa    Universal
um umbra       Umbra
un univers     Univers b:ZurichBT
ur centaur     Centaur b:Venetian301BT
ut utopia      Utopia
uw usherwoo    Usherwood
uy universi    University
v0 vineta      Vineta
va activa      Activa
vc vectora     Vectora
vd vandijck    VanDijck
vi victoria    Victoria
vj veljovic    Veljovic
vl versaill    Versailles
vr vagrnd      VAGRounded
w0 weddingt    WeddingT
wb walbaum     Walbaum
```

```
wd weideman    Weidemann
wg wlklgth     WilhelmKlingsporGotisch
wi wingding    Wingdings
wk wilke       Wilke
wn windsor     Windsor
wr wittenbe    WitternbergerFrakt
ws weiss       Weiss
ww willow      Willow
yg centuryg    CenturyGothic
yh strayhor    Strayhorn
ym stymie      Stymie
za zantiqua    ZAntiqua
zc zapfchan    ZapfChancery m:ZapfChanceryPS u:URWChanceryL
zd zapfding    ZapfDingbats m:ZapfDingbatsPS u:Dingbats
zg neuzeitg    NeuzeitGrotesk
zt zeitgeis    Zeitgeist
```

2.3 Weights

The *weight* of a font specifies its boldness. Arranged from lightest to heaviest (more or less):

hairline, extra light, light
book, regular, medium
demibold, semibold, bold, extra bold, heavy
black, ultra, poster

Here is the table, from the file 'weight.map'. It is organized alphabetically by abbreviation. Each line consists of an abbreviation and any parts of a PostScript 'FontName' which use that abbreviation.

```
a Thin Hairline
b Bold
c Black
d Demi
h Heavy Heavyface
j ExtraLight
k Book
l Light
m Medium
p Poster
r Regular Roman
s Semibold
u Ultra UltraBlack
x ExtraBold ExtraBlack
```

2.4 Variants

Variants include typeface variations (e.g., italic, sans serif), and font encodings (e.g., Adobe standard, TEX text).

A fontname may require multiple variants. To resolve the worst ambiguities, we specify that any encoding variant ('7', '8', or '9', see below) come last and any other numeral variant come first (to avoid confusion with a design size). We recommend but do not require that the other variants be given in alphabetical order. (It's not required because it's too painful to implement the sorting in TEX, and many existing names already have non-alphabetized variants.)

The letterspacing possibilities introduced by `fontinst` and virtual fonts have not yet become sufficiently widespread to make standardization beneficial. Likewise for the many possible ways to generate small caps fonts.

Notes on specific variants, both old and new:

'1'
'4'
'6'
'b'   These variants ('semisans', 'bright', 'semiserif', and 'fax') were used only for single typefaces, so to conserve variant abbreviations, they now have typeface abbreviations instead. Also, for 'b', to avoid too-long names; and for the others, to avoid variant vs. design-size ambiguities.

'g'
'h'   Since these variants were not actually used in any font names, they are now obsolete and may be reassigned in the future.

'5'
'6'
'7'
'8'
'9'   These characters begin a two-character *encoding variant*. Generally, '7' is for 7-bit encodings, '8' is for 8-bit encodings, and '9' is for expertised encodings with or without oldstyle digits (see the 'x' item below), but this is not an absolute rule. Also, '5' is presently used for phonetic encodings and '6' for Cyrillic encodings. The '9s' ('`SuperFont`') variant contain all of Adobe, Latin 1, and Expert glyphs, perhaps with slightly different metrics than the original fonts.

             For a font to be named with a certain encoding variant, it's not necessary that all the characters appear in precisely the same positions as in the encoding definition. It's enough that the usual TEX macros work. In practice, this means that it's ok for a font to be labelled '7t' if the only difference from Computer Modern is that the ligatures and the '`lslash`' and '`Lslash`' characters are different, since it's impossible to access or change the ligature table from TEX. Standard PostScript fonts don't have an '`lslash`' character the way Computer Modern does, but they do have the '`Lslash`' and '`lslash`' characters themselves, so the usual TEX `lslash` and `Lslash` macros can be made to work via ligatures. See the file '`T1.etx`' file in the `fontinst` distribution for details.

If a name does not contain a specific encoding variant, its encoding is unspecified. For example, some of the fonts distributed with Dvips(k) have names like 'ptmr' for 'Times-Roman'; they use the Dvips encoding (see ⟨undefined⟩ [dvips], page ⟨undefined⟩), which is close to (but not the same as) the TEX text encoding (as in Computer Modern Roman). Similarly, the TFM files distributed with Dvilj(k) for the builtin LaserJet 4 fonts have names like 'cunm', since these fonts, while compatible with TEX text, contain many additional characters.

'9'
These items are needed only because 'x' (and possibly 'j') followed by a two-character regular variant makes some names too long. That is, '9t' is equivalent in meaning to 'x7t', and '9d' is equivalent to 'jx7t'. (This may not be true for all '9x' encodings, though.)

'k'
'z'
These variants (indicating Greek and Cyrillic fonts, respectively) are obsolete; future fonts in different scripts should be assigned an appropriate encoding abbreviation. These are not currently standardized, due to ignorance of the appropriate encodings. Please send suggestions for abbreviations to the address in Chapter 1 [Introduction], page 1.

'm'
'v'
'y'
These math-related variants remain for the sake of typeface-specific math encodings, e.g., Lucida. Fonts that use the Computer Modern math encodings should use '7m' (see ⟨undefined⟩ [texmital], page ⟨undefined⟩), '7v' (see ⟨undefined⟩ [texmext], page ⟨undefined⟩), and '7y' (see ⟨undefined⟩ [texmsym], page ⟨undefined⟩).

'n'
This is used for several different (but very rare) variants: only the Stone typeface has an "informal" variant, and only a few Monotype fonts have a "schoolbook" variant, with different 'a', 'g', and 'y' shapes.

'r'
Included only if no other variants, including encodings, apply, and either the width (see Section 2.5 [Widths], page 18) is not 'r' or a design size is present. I.e., 'r' is only used as a placeholder. When the normal version of the typeface is sans serif (e.g., Helvetica), 'r' should be used when necessary, not 's'. Use 's' only when the typeface family has both serif and sans serif variants.

's'
't'
Mittelbach in *TUGboat* 13(1) suggests that these variants (for 'sans' and 'typewriter') should be identified as part of the typeface name, because there are few typeface families with these variants. I feel that since they are logically variants, it's best to name them that way. But 'LucidaSans' (see Section 2.2 [Typefaces], page 4) and a few others are exceptions, to avoid too-long names.

'x'
'8x'
'9?'
'8x' indicates a font in the 'Expert' encoding itself. 'x' indicates an *expertised* font, i.e., a composite (virtual) font that includes characters from an '8x' font. And in fact an 'x*ee*' sequence is replaced by '9*e*', to save characters.

Fontname 1 assignments are shown in brackets in the following table, from the file
'`variant.map`'. It is organized alphabetically by abbreviation. Each line consists of an
abbreviation and either any parts of a PostScript '`FontName`' which use that abbreviation
or the PostScript '`Encoding`' name.

```
obsolete [0=¿8a] Adobe standard encoding
obsolete [1 SemiSans]
obsolete [2=¿7c] Fraktur encoding
obsolete [3=¿7f] Fraction
obsolete [4 fax; now typeface 'lx', Lucida Fax]
5 escape for (presently) phonetic encodings
6 escape for Cyrillic encodings [was 'SemiSerif']
7 escape for (mostly) 7-bit encodings
8 escape for (mostly) 8-bit encodings
9 escape for (presently) expert encodings [was oldstyle digits]
a Alt Arrows Alternative              [was alternate encoding]
obsolete [b bright; now typeface lh, Lucida Bright]
c SmallCaps
d Display Titling Caption Headline TallCaps SwashCaps LombardicCaps
e Engraved Copperplate Elite
f Fraktur Gothic OldEnglish Handtooled ('gothic' can also be sans)
g SmallText        designed for small sizes [was grooved, as in the IBM logo]
h Shadow
i Italic Kursiv Ital                  text italic
j                                     old-style digits [was invisible]
k Greek                               obsolete
l Outline OpenFace Blanks
m math italic
n Informal Fashion Schlbk             for Stone
o Oblique Obl                         slanted
p Ornaments
obsolete [q=¿8t Cork (TeX extended) encoding]
r                                     roman or sans; often omitted, see text
s Gothic                              sans serif
t Monospace                           fixed-width typewriter
u                                     unslanted italic
v MathExtension
w Script Handwritten Swash Calligraphy Cursive Tango
x built with Adobe expert encoding [was expert-encoded]
y MathSymbol
z Cyrillic                            font-dependent Cyrillic
5a PhoneticAlternate
5i PhoneticIPA
5s sil-IPA
6b Cyrillic part of ISO 8859-5, seven bits
6d Cyrillic CP866 encoding
6i ISO 8859-5
6k Cyrillic KOI-8 encoding
6m Cyrillic Macintosh encoding
```

6w	Cyrillic CP1251 encoding	
7a	A	alternate characters only
7c	Dfr	Fraktur
7d	OsF OSF	oldstyle digit encoding
7f	Fraction	
7k	OT2Cyrillic	
7m	TeXMathItalicEncoding	see ⟨undefined⟩ [texmital], page ⟨undefined⟩
7t		TEX text encoding (as in Computer Modern Roman)
7v	TeXMathExtensionEncoding	see ⟨undefined⟩ [texmext], page ⟨undefined⟩
7y	TeXMathSymbolEncoding	see ⟨undefined⟩ [texmsym], page ⟨undefined⟩
82	GreekKeys	
83	Ibycus1	
84	Ibycus2	
8a	StandardEncoding	Adobe standard encoding, see ⟨undefined⟩ [8a], page ⟨undefined⟩
8c	TeXTextCompanion	LaTEX's TS1
8m	Macintosh standard encoding	
8r	TeXBase1Encoding	see ⟨undefined⟩ [8r], page ⟨undefined⟩
8t	CorkEncoding	see ⟨undefined⟩ [cork], page ⟨undefined⟩
8u	XT2Encoding	cmtt + Latin 2, see 'xl2.enc'
8w	Windows 3.1 ANSI encoding	
8x	Expert	expert encoding
8z	XL2Encoding	cmr + Latin 2, see 'xl2.enc'
9c	expert + Text companion	
9d	expert + oldstyle digits + Cork	
9e	expert + Cork	
9o	expert + oldstyle digits + TEX text	
9s	SF	SuperFont
9t	expert + TEX text	

2.5 Widths

The *width* of a font specifies the compression or expansion of the font. Arranged from narrowest to widest (more or less):

ultra compressed, extra condensed, compressed, condensed, narrow
regular
extended, expanded, wide

Expansion or compression of fonts is sometimes done automatically (as by the PostScript `scale` operator), and sometimes done by humans. In the latter case, the human will also presumably choose a font name which includes 'Extended' or 'Expanded' or 'Condensed' or 'Narrow' or whatever according to their own preferences; the abbreviation can follow along. When creating a new synthetically expanded or compressed font for use with TEX, e.g., with Afm2tfm or `fontinst`, use 'n' and 'e'.

Here is the table, from the file 'width.map'. It is organized alphabetically by abbreviation. Each line consists of an abbreviation and any parts of a PostScript 'FontName' which use that abbreviation.

```
c Condensed Cond
e Expanded
n Narrow
o UltraCondensed
p Compressed Compact
q ExtraCompressed ExtraCondensed
r Normal Medium Regular (usually omitted)
t Thin
u UltraCompressed
v ExtraExpanded more than Expanded, less than Wide
w Wide
x Extended Elongated
```

3 Long names

Eight characters is not enough to unambiguously represent all fonts. To do that, we have to allow ourselves arbitrarily long names. Although we certainly cannot use such names for the files themselves, we could still use them in TeX documents given a simple mapping file, as discussed below.

3.1 A fontname mapping file

At the moment, most implementations of TeX look up a TFM file (as part of the `font` command), by searching for a file with the name given by the user (possibly in any of series of directories). But if we also looked TFM names up in *another* file (or set of files), which specifies the actual filename, the fontname given in the TeX source file could be almost anything at all, of any length.

In version 5.851d of Web2c, I implemented this mapping file. Each file '`texfonts.map`' in a search path is read for abbreviations. The file has a straightforward format: each line specifies the filename and the TeX name for one font, separated by whitespace. Extra information on the line is ignored; then more information could be specified for the benefit of DVI-reading programs in the same file. Comments start with `%` and continue to the end of the line.

Besides allowing long names, this sort of mapping file has other benefits. TeX source or DVI files can be more easily transported, because the font names in a particular file can be made work on every system. Also, when combined with a consistent naming scheme, macros could be written to access any of a number of fonts. Right now, each font family has to have specialized macros written to deal with it.

Incidentally, Professor Knuth has approved this as a legitimate "system-dependent" extension; a TeX with such a feature can still be called "TeX".

3.2 A naming scheme for long names

Once we allow ourselves long names, we can construct a naming scheme to handle arbitrary fonts without much difficulty. Here is one proposal, based on the X Window System font naming conventions.

supplier–family–weight–variants–width–encoding--size

supplier is the usual `Adobe`, `Autologic`, etc., as well as `unknown` or `bizarre`—this last meaning the rest of the name is nonstandard. If the *supplier* is missing, i.e., the name starts with a `-`, "public domain" is assumed. For fonts made by individuals, the initials of the designer would probably make a good *supplier*.

family is `ComputerModern` or `Times` or whatever.

Everything else is optional. The `--` before the *size* lets one specify a name with, say, a weight and variants, but then skip the *width* and *encoding*, but still be able to give a size.

weight and *width* are as described earlier.

If there is more than one variant, they are separated with some character other than '-', say '=':

```
B+H-Lucida-Bold-Sans=Typewriter--10
```

encoding is what Metafont calls the `font coding scheme`—the layout of the characters in the font. For example, 'Cork' or 'ISOLatin1' or 'AdobeAlternate'.

Names are case-sensitive, for consistency with the rest of TeX and with PostScript, etc. Spaces cannot be used in the name, to make it easier for TeX to parse. Likewise, characters with default category codes other than 11 (letter) or 12 (other) should not be used.

Another possibility is to forget all the above, and simply use the vendor's name (perhaps prefixed by the vendor): 'Times-Roman'.

Appendix A Font name lists

These sections contain a list of fonts from various suppliers together with the corresponding names.

A.1 Standard PostScript fonts

Abbreviated names for the 35 standard PostScript fonts. An encoding variant, such as '8a' for the Adobe 'StandardEncoding', is omitted.

'pagk'	'AvantGarde-Book'
'pagko'	'AvantGarde-BookOblique'
'pagd'	'AvantGarde-Demi'
'pagdo'	'AvantGarde-DemiOblique'
'pbkd'	'Bookman-Demi'
'pbkdi'	'Bookman-DemiItalic'
'pbkl'	'Bookman-Light'
'pbkli'	'Bookman-LightItalic'
'pcrb'	'Courier-Bold'
'pcrbo'	'Courier-BoldOblique'
'pcrr'	'Courier'
'pcrro'	'Courier-Oblique'
'phvb'	'Helvetica-Bold'
'phvbo'	'Helvetica-BoldOblique'
'phvbrn'	'Helvetica-NarrowBold'
'phvbon'	'Helvetica-NarrowBoldOblique'
'phvr'	'Helvetica'
'phvro'	'Helvetica-Oblique'
'phvrrn'	'Helvetica-Narrow'
'phvron'	'Helvetica-NarrowOblique'
'pncb'	'NewCenturySchlbk-Bold'
'pncbi'	'NewCenturySchlbk-BoldItalic'
'pncri'	'NewCenturySchlbk-Italic'
'pncr'	'NewCenturySchlbk-Roman'

'pplb'   'Palatino-Bold'

'pplbi'   'Palatino-BoldItalic'

'pplri'   'Palatino-Italic'

'pplr'   'Palatino-Roman'

'psyr'   'Symbol'

'ptmb'   'Times-Bold'

'ptmbi'   'Times-BoldItalic'

'ptmri'   'Times-Italic'

'ptmr'   'Times-Roman'

'pzcmi'   'ZapfChancery-MediumItalic'

'pzdr'   'ZapfDingbats'

A.2 Adobe fonts

The 'adobe.map' file has abbreviations for Adobe fonts.

```
ierb8r   ItcEras-Bold
ierd8r   ItcEras-Demi
ierk8r   ItcEras-Book
ierl8r   ItcEras-Light
ierm8r   ItcEras-Medium
ieru8r   ItcEras-Ultra
ikbb8r   ItcKabel-Bold
ikbd8r   ItcKabel-Demi
ikbk8r   ItcKabel-Book
ikbm8r   ItcKabel-Medium
ikbu8r   ItcKabel-Ultra
isyb8r   ItcSymbol-Bold
isybi8r  ItcSymbol-BoldItalic
isyc8r   ItcSymbol-Black
isyci8r  ItcSymbol-BlackItalic
isyk8r   ItcSymbol-Book
isyki8r  ItcSymbol-BookItalic
isym8r   ItcSymbol-Medium
isymi8r  ItcSymbol-MediumItalic
paab8r   Aachen-Bold
pabr8r   ArnoldBoecklin
pacb7a   ACaslon-AltBold
pacb8r   ACaslon-Bold
pacb8x   ACaslonExp-Bold
pacbi7a  ACaslon-AltBoldItalic
pacbi8r  ACaslon-BoldItalic
pacbi8x  ACaslonExp-BoldItalic
```

```
pacbwi8r ACaslon-SwashBoldItalic
pacr7a   ACaslon-AltRegular
pacr8r   ACaslon-Regular
pacr8x   ACaslonExp-Regular
pacri7a  ACaslon-AltItalic
pacri8r  ACaslon-Italic
pacri8x  ACaslonExp-Italic
pacrp8r  ACaslon-Ornaments
pacrwi8r ACaslon-SwashItalic
pacs7a   ACaslon-AltSemibold
pacs8r   ACaslon-Semibold
pacs8x   ACaslonExp-Semibold
pacsi7a  ACaslon-AltSemiboldItalic
pacsi8r  ACaslon-SemiboldItalic
pacsi8x  ACaslonExp-SemiboldItalic
pacswi8r ACaslon-SwashSemiboldItalic
padb8r   AGaramond-Bold
padb8x   AGaramondExp-Bold
padbi8r  AGaramond-BoldItalic
padbi8x  AGaramondExp-BoldItalic
padr7a   AGaramondAlt-Regular
padr8r   AGaramond-Regular
padr8x   AGaramondExp-Regular
padrd8r  AGaramond-Titling
padri7a  AGaramondAlt-Italic
padri8r  AGaramond-Italic
padri8x  AGaramondExp-Italic
pads8r   AGaramond-Semibold
pads8x   AGaramondExp-Semibold
padsi8r  AGaramond-SemiboldItalic
padsi8x  AGaramondExp-SemiboldItalic
pagb8r   AvantGarde-Bold
pagbo8r  AvantGarde-BoldObl
pagbr8rc AvantGarde-CondBold
pagd8r   AvantGarde-Demi
pagdo8r  AvantGarde-DemiOblique
pagdr8rc AvantGarde-CondDemi
pagi8r   AvantGarde-ExtraLight
pagio8r  AvantGarde-ExtraLightObl
pagk8r   AvantGarde-Book
pagko8r  AvantGarde-BookOblique
pagkr8rc AvantGarde-CondBook
pagm8r   AvantGarde-Medium
pagmo8r  AvantGarde-MediumObl
pagmr8rc AvantGarde-CondMedium
pamb8r   Americana-Bold
pamr8r   Americana
pamri8r  Americana-Italic
```

```
pamx8r   Americana-ExtraBold
panr8r   Anna
paob7a   AntiqueOliveEastA-Bold
paob8r   AntiqueOlive-Bold
paobr8rc AntiqueOlive-BoldCond
paoc7a   AntiqueOliveEastA-Black
paoc8r   AntiqueOlive-Black
paohix8r AntiqueOlive-NordItalic
paohrx8r AntiqueOlive-Nord
paol7a   AntiqueOliveEastA-Light
paol8r   AntiqueOlive-Light
paor7a   AntiqueOliveEastA-Roman
paor8r   AntiqueOlive-Roman
paori7a  AntiqueOliveEastA-Italic
paori8r  AntiqueOlive-Italic
paorr8rn AntiqueOlive-Compact
parr7a   Arcadia-A
parr8r   Arcadia
pasr8r   Aldus-Roman
pasrc8r  Aldus-RomanSC
pasri7d  Aldus-ItalicOsF
pasri8r  Aldus-Italic
patb7aa  AmericanTypewriter-BoldA
patb7ac  AmericanTypewriter-BoldCondA
patb8r   AmericanTypewriter-Bold
patbr8rc AmericanTypewriter-BoldCond
patl7a   AmericanTypewriter-LightA
patl7ac  AmericanTypewriter-LightCondA
patl8r   AmericanTypewriter-Light
patlr8rc AmericanTypewriter-LightCond
patm7a   AmericanTypewriter-MediumA
patm8r   AmericanTypewriter-Medium
patr7ac  AmericanTypewriter-CondA
patrr8rc AmericanTypewriter-Cond
paub8r   Auriol-Bold
paubi8r  Auriol-BoldItalic
pauc8r   Auriol-Black
pauci8r  Auriol-BlackItalic
paur8r   Auriol
pauri8r  Auriol-Italic
pavc8r   Avenir-Black
pavco8r  Avenir-BlackOblique
pavh8r   Avenir-Heavy
pavho8r  Avenir-HeavyOblique
pavk8r   Avenir-Book
pavko8r  Avenir-BookOblique
pavl8r   Avenir-Light
pavlo8r  Avenir-LightOblique
```

```
pavm8r    Avenir-Medium
pavmo8r   Avenir-MediumOblique
pavr8r    Avenir-Roman
pavro8r   Avenir-Oblique
pazb8r    AkzidenzGrotesk-Bold
pazc8r    AkzidenzGrotesk-Black
pazl8r    AkzidenzGrotesk-Light
pazr8r    AkzidenzGrotesk-Roman
pb0r8r    Blackoak
pbbb8r    Bembo-Bold
pbbbi8r   Bembo-BoldItalic
pbbr8r    Bembo
pbbri8r   Bembo-Italic
pbbs8r    Bembo-Semibold
pbbsi8r   Bembo-SemiboldItalic
pbbx8r    Bembo-ExtraBold
pbbxi8r   Bembo-ExtraBoldItalic
pbcr8r    Banco
pbdb8r    Bodoni-Bold
pbdbi8r   Bodoni-BoldItalic
pbdbr8rc  Bodoni-BoldCondensed
pbdk8r    Bodoni-Book
pbdki8r   Bodoni-BookItalic
pbdp8r    Bodoni-Poster
pbdpi8r   Bodoni-PosterItalic
pbdpr8rp  Bodoni-PosterCompressed
pbdr8r    Bodoni
pbdri8r   Bodoni-Italic
pbgb8r    Benguiat-Bold
pbgk8r    Benguiat-Book
pbhb8r    Bauhaus-Bold
pbhd8r    Bauhaus-Demi
pbhh8r    Bauhaus-Heavy
pbhl8r    Bauhaus-Light
pbhm8r    Bauhaus-Medium
pbir8r    Birch
pbkb8r    Bookman-Bold
pbkbi8r   Bookman-BoldItalic
pbkd8r    Bookman-Demi
pbkdi8r   Bookman-DemiItalic
pbkl8r    Bookman-Light
pbkli8r   Bookman-LightItalic
pbkm8r    Bookman-Medium
pbkmi8r   Bookman-MediumItalic
pblb8r    Belwe-Bold
pbll8r    Belwe-Light
pblm8r    Belwe-Medium
pblrr8rc  Belwe-Condensed
```

```
pbrb8r    Berling-Bold
pbrbi8r   Berling-BoldItalic
pbrr8r    Berling-Roman
pbrri8r   Berling-Italic
pbsr8r    BakerSignet
pburw8r   BrushScript
pbvbz8r   BaskervilleCyrillic-Bold
pbvroz8r  BaskervilleCyrillic-Inclined
pbvrz8r   BaskervilleCyrillic-Upright
pbyb8r    Berkeley-Bold
pbybi8r   Berkeley-BoldItalic
pbyc8r    Berkeley-Black
pbyci8r   Berkeley-BlackItalic
pbyk8r    Berkeley-Book
pbyki8r   Berkeley-BookItalic
pbym8r    Berkeley-Medium
pbyri8r   Berkeley-Italic
pc0r7c    Carolina-Dfr
pc0r8r    Carolina
pc2b8r    CaslonTwoTwentyFour-Bold
pc2bi8r   CaslonTwoTwentyFour-BoldIt
pc2c8r    CaslonTwoTwentyFour-Black
pc2ci8r   CaslonTwoTwentyFour-BlackIt
pc2k8r    CaslonTwoTwentyFour-Book
pc2ki8r   CaslonTwoTwentyFour-BookIt
pc2m8r    CaslonTwoTwentyFour-Medium
pc2mi8r   CaslonTwoTwentyFour-MediumIt
pc3r8r    CaslonThree-Roman
pc3rc8r   CaslonThree-RomanSC
pc3ri7d   CaslonThree-ItalicOsF
pc3ri8r   CaslonThree-Italic
pc5r8r    CaslonFiveForty-Roman
pc5rc8r   CaslonFiveForty-RomanSC
pc5ri7d   CaslonFiveForty-ItalicOsF
pc5ri8r   CaslonFiveForty-Italic
pcarl8r   CaslonOpenFace
pcbc8r    CooperBlack
pcbci8r   CooperBlack-Italic
pccrw8r   CascadeScript
pcdb8r    Clarendon-Bold
pcdl8r    Clarendon-Light
pcdr8r    Clarendon
pceb7d    Centennial-BoldOsF
pceb8r    Centennial-Bold
pcebi7d   Centennial-BoldItalicOsF
pcebi8r   Centennial-BoldItalic
pcec7d    Centennial-BlackOsF
pcec8r    Centennial-Black
```

```
pceci7d   Centennial-BlackItalicOsF
pceci8r   Centennial-BlackItalic
pcel8r    Centennial-Light
pcelc8r   Centennial-LightSC
pceli7d   Centennial-LightItalicOsF
pceli8r   Centennial-LightItalic
pcer8r    Centennial-Roman
pcerc8r   Centennial-RomanSC
pceri7d   Centennial-ItalicOsF
pceri8r   Centennial-Italic
pcfb8r    Clearface-Bold
pcfbi8r   Clearface-BoldItalic
pcfc8r    Clearface-Black
pcfci8r   Clearface-BlackItalic
pcfh8r    Clearface-Heavy
pcfhi8r   Clearface-HeavyItalic
pcfr8r    Clearface-Regular
pcfri8r   Clearface-RegularItalic
pcgb8r    Charlemagne-Bold
pcgr8r    Charlemagne-Regular
pcib8r    Candida-Bold
pcir8r    Candida-Roman
pciri8r   Candida-Italic
pcnb8r    Century-Bold
pcnbi8r   Century-BoldItalic
pcnbi8rc  Century-BoldCondensedItalic
pcnbr8rc  Century-BoldCondensed
pcnk8r    Century-Book
pcnki8r   Century-BookItalic
pcnki8rc  Century-BookCondensedItalic
pcnkr8rc  Century-BookCondensed
pcnl8r    Century-Light
pcnli8r   Century-LightItalic
pcnli8rc  Century-LightCondensedItalic
pcnlr8rc  Century-LightCondensed
pcnri8rx  CenturyExpanded-Italic
pcnrr8rx  CenturyExpanded
pcnu8r    Century-Ultra
pcnui8r   Century-UltraItalic
pcnui8rc  Century-UltraCondensedItalic
pcnur8rc  Century-UltraCondensed
pcob8r    Cochin-Bold
pcobi8r   Cochin-BoldItalic
pcor8r    Cochin
pcori8r   Cochin-Italic
pcqr8r    Cheq
pcrb8r    Courier-Bold
pcrbo8r   Courier-BoldOblique
```

```
pcrr8r   Courier
pcrro8r  Courier-Oblique
pctb8r   Cheltenham-Bold
pctbi8r  Cheltenham-BoldItalic
pctbi8rc Cheltenham-BoldCondItalic
pctbr8rc Cheltenham-BoldCond
pctk8r   Cheltenham-Book
pctki8r  Cheltenham-BookItalic
pctki8rc Cheltenham-BookCondItalic
pctkr8rc Cheltenham-BookCond
pctl8r   Cheltenham-Light
pctli8r  Cheltenham-LightItalic
pctli8rc Cheltenham-LightCondItalic
pctlr8rc Cheltenham-LightCond
pctrio8r Cheltenham-UltraCondItalic
pctrro8r Cheltenham-UltraCond
pctu8r   Cheltenham-Ultra
pctui8r  Cheltenham-UltraItalic
pcub8r   CenturyOldStyle-Bold
pcur8r   CenturyOldStyle-Regular
pcuri8r  CenturyOldStyle-Italic
pcvr7c   Clairvaux-Dfr
pcvr8r   Clairvaux
pcwr8r   Cottonwood
pcxb8r   Caxton-Bold
pcxbi8r  Caxton-BoldItalic
pcxk8r   Caxton-Book
pcxki8r  Caxton-BookItalic
pcxl8r   Caxton-Light
pcxli8r  Caxton-LightItalic
pcyb8r   City-Bold
pcybi8r  City-BoldItalic
pcyl8r   City-Light
pcyli8r  City-LightItalic
pcym8r   City-Medium
pcymi8r  City-MediumItalic
pdcb8r   DomCasual-Bold
pdcr8r   DomCasual
pddr7c   DucDeBerry-Dfr
pddr8r   DucDeBerry
pdrb8r   Doric-Bold
pefb8r   EgyptienneF-Bold
pefc8r   EgyptienneF-Black
pefr8r   EgyptienneF-Roman
pefri8r  EgyptienneF-Italic
pegb7d   StempelGaramond-BoldOsF
pegb8r   StempelGaramond-Bold
pegbi7d  StempelGaramond-BoldItalicOsF
```

```
pegbi8r   StempelGaramond-BoldItalic
pegr8r    StempelGaramond-Roman
pegrc8r   StempelGaramond-RomanSC
pegri7d   StempelGaramond-ItalicOsF
pegri8r   StempelGaramond-Italic
pehr8r    DINEngschrift
peib8r    Esprit-Bold
peibi8r   Esprit-BoldItalic
peic8r    Esprit-Black
peici8r   Esprit-BlackItalic
peik8r    Esprit-Book
peiki8r   Esprit-BookItalic
peim8r    Esprit-Medium
peimi8r   Esprit-MediumItalic
pesb8r    Eurostile-Bold
pesb8rx2  Eurostile-BoldExtendedTwo
pesbo8r   Eurostile-BoldOblique
pesbr8rc  Eurostile-BoldCondensed
pesd8r    Eurostile-Demi
pesdo8r   Eurostile-DemiOblique
pesr28rx  Eurostile-ExtendedTwo
pesr8r    Eurostile
pesr8rc2  Eurostile-Condensed
pesro8r   Eurostile-Oblique
pexb7a    ExcelsiorEastA-Bold
pexb8r    Excelsior-Bold
pexbz8r   ExcelsiorCyrillic-Bold
pexr7a    ExcelsiorEastA-Roman
pexr8r    Excelsior
pexri7a   ExcelsiorEastA-Italic
pexri8r   Excelsior-Italic
pexroz8r  ExcelsiorCyrillic-Inclined
pexrz8r   ExcelsiorCyrillic-Upright
pfab8r    Formata-Bold
pfabi8r   Formata-BoldItalic
pfal8r    Formata-Light
pfali8r   Formata-LightItalic
pfam8r    Formata-Medium
pfami8r   Formata-MediumItalic
pfar8r    Formata-Regular
pfari8r   Formata-Italic
pfgd8r    FranklinGothic-Demi
pfgdo8r   FranklinGothic-DemiOblique
pfgh8r    FranklinGothic-Heavy
pfgho8r   FranklinGothic-HeavyOblique
pfgk8r    FranklinGothic-Book
pfgko8r   FranklinGothic-BookOblique
pfgr8r    FranklinGothic-Roman
```

```
pfgrr8rc FranklinGothic-Condensed
pfgrr8rq FranklinGothic-ExtraCond
pflb8r   Flora-Bold
pflm8r   Flora-Medium
pfnb8r   Fenice-Bold
pfnbo8r  Fenice-BoldOblique
pfnl8r   Fenice-Light
pfnlo8r  Fenice-LightOblique
pfnr8r   Fenice-Regular
pfnro8r  Fenice-RegularOblique
pfnu8r   Fenice-Ultra
pfnuo8r  Fenice-UltraOblique
pfob8r   Folio-Bold
pfobr8rc Folio-BoldCondensed
pfol8r   Folio-Light
pfom8r   Folio-Medium
pfox8r   Folio-ExtraBold
pfqb8r   FrizQuadrata-Bold
pfqr8r   FrizQuadrata
pfrb8r   Frutiger-Bold
pfrbi8r  Frutiger-BoldItalic
pfrbr8rc Frutiger-BoldCn
pfrc8r   Frutiger-Black
pfrci8r  Frutiger-BlackItalic
pfrcr8rc Frutiger-BlackCn
pfrl8r   Frutiger-Light
pfrli8r  Frutiger-LightItalic
pfrlr8rc Frutiger-LightCn
pfrr8r   Frutiger-Roman
pfrri8r  Frutiger-Italic
pfrrr8rc Frutiger-Cn
pfru8r   Frutiger-UltraBlack
pfrxr8rc Frutiger-ExtraBlackCn
pfsrw8r  FreestyleScript
pftrf7c  FetteFraktur-Dfr
pftrf8r  FetteFraktur
pfub8r   Futura-Bold
pfubo8r  Futura-BoldOblique
pfubo8rc Futura-CondensedBoldOblique
pfubr8rc Futura-CondensedBold
pfuh8r   Futura-Heavy
pfuho8r  Futura-HeavyOblique
pfuk8r   Futura-Book
pfuko8r  Futura-BookOblique
pful8r   Futura-Light
pfulo8r  Futura-LightOblique
pfulo8rc Futura-CondensedLightOblique
pfulr8rc Futura-CondensedLight
```

```
pfur8r    Futura
pfuro8r   Futura-Oblique
pfuro8rc  Futura-CondensedOblique
pfurr8rc  Futura-Condensed
pfux8r    Futura-ExtraBold
pfuxo8r   Futura-ExtraBoldOblique
pfuxo8rc  Futura-CondExtraBoldObl
pfuxr8rc  Futura-CondensedExtraBold
pfycr8rc  Flyer-BlackCondensed
pfyxr8rc  Flyer-ExtraBlackCondensed
pg1r8r    Gothic-Thirteen
pg3b8r    GaramondThree-Bold
pg3bc8r   GaramondThree-BoldSC
pg3bi7d   GaramondThree-BoldItalicOsF
pg3bi8r   GaramondThree-BoldItalic
pg3r8r    GaramondThree
pg3rc8r   GaramondThree-SC
pg3ri7d   GaramondThree-ItalicOsF
pg3ri8r   GaramondThree-Italic
pggb8r    GarthGraphic-Bold
pggbi8r   GarthGraphic-BoldItalic
pggbr8rc  GarthGraphic-BoldCondensed
pggc8r    GarthGraphic-Black
pggr8r    GarthGraphic
pggri8r   GarthGraphic-Italic
pggrr8rc  GarthGraphic-Condensed
pggx8r    GarthGraphic-ExtraBold
pgjb7d    Granjon-BoldOsF
pgjb8r    Granjon-Bold
pgjr8r    Granjon
pgjrc8r   Granjon-SC
pgjri7d   Granjon-ItalicOsF
pgjri8r   Granjon-Italic
pglb8r    Galliard-Bold
pglbi8r   Galliard-BoldItalic
pglc8r    Galliard-Black
pglci8r   Galliard-BlackItalic
pglr8r    Galliard-Roman
pglri8r   Galliard-Italic
pglu8r    Galliard-Ultra
pglui8r   Galliard-UltraItalic
pgmb8r    Garamond-Bold
pgmbi8r   Garamond-BoldItalic
pgmbi8rc  Garamond-BoldCondensedItalic
pgmbr8rc  Garamond-BoldCondensed
pgmk8r    Garamond-Book
pgmki8r   Garamond-BookItalic
pgmki8rc  Garamond-BookCondensedItalic
```

```
pgmkr8rc Garamond-BookCondensed
pgml8r   Garamond-Light
pgmli8r  Garamond-LightItalic
pgmli8rc Garamond-LightCondensedItalic
pgmlr8rc Garamond-LightCondensed
pgmu8r   Garamond-Ultra
pgmui8r  Garamond-UltraItalic
pgmui8rc Garamond-UltraCondensedItalic
pgmur8rc Garamond-UltraCondensed
pgpa8r   Glypha-Thin
pgpao8r  Glypha-ThinOblique
pgpb8r   Glypha-Bold
pgpbo8r  Glypha-BoldOblique
pgpc8r   Glypha-Black
pgpco8r  Glypha-BlackOblique
pgpl8r   Glypha-Light
pgplo8r  Glypha-LightOblique
pgpr8r   Glypha
pgpro8r  Glypha-Oblique
pgsb8r   GillSans-Bold
pgsbi8r  GillSans-BoldItalic
pgsbr8rc GillSans-BoldCondensed
pgsl8r   GillSans-Light
pgsli8r  GillSans-LightItalic
pgsr8r   GillSans
pgsri8r  GillSans-Italic
pgsrr8rc GillSans-Condensed
pgsu8r   GillSans-UltraBold
pgsur8rc GillSans-UltraBoldCondensed
pgsx8r   GillSans-ExtraBold
pgub8r   Guardi-Bold
pgubi8r  Guardi-BoldItalic
pguc8r   Guardi-Black
pguci8r  Guardi-BlackItalic
pgur8r   Guardi-Roman
pguri8r  Guardi-Italic
pgvb8r   Giovanni-Bold
pgvbi8r  Giovanni-BoldItalic
pgvc8r   Giovanni-Black
pgvci8r  Giovanni-BlackItalic
pgvk8r   Giovanni-Book
pgvki8r  Giovanni-BookItalic
pgyb8r   Goudy-Bold
pgybi8r  Goudy-BoldItalic
pgyh8r   Goudy-Heavyface
pgyhi8r  Goudy-HeavyfaceItalic
pgyr8r   Goudy
pgyrc8r  Goudy-SC
```

```
pgyri8r   Goudy-Italic
pgyx8r    Goudy-ExtraBold
phbr8r    Hobo
phcr8r    Herculanum
phgb8r    Hiroshige-Bold
phgbi8r   Hiroshige-BoldItalic
phgc8r    Hiroshige-Black
phgci8r   Hiroshige-BlackItalic
phgk8r    Hiroshige-Book
phgki8r   Hiroshige-BookItalic
phgm8r    Hiroshige-Medium
phgmi8r   Hiroshige-MediumItalic
phir8r    HelveticaInserat-Roman
phmr8r    Charme
phna8r    HelveticaNeue-Thin
phnai8rt  HelveticaNeue-ThinItalic
phnao8rc  HelveticaNeue-ThinCondObl
phnao8rx  HelveticaNeue-ThinExtObl
phnar8rc  HelveticaNeue-ThinCond
phnar8rx  HelveticaNeue-ThinExt
phnb7a    HelveticaNeueEastA-Bold
phnb8r    HelveticaNeue-Bold
phnbi8r   HelveticaNeue-BoldItalic
phnbl8r   HelveticaNeue-BoldOutline
phnbo7a   HelveticaNeueEastA-BoldObl
phnbo8rc  HelveticaNeue-BoldCondObl
phnbo8rx  HelveticaNeue-BoldExtObl
phnbr8rc  HelveticaNeue-BoldCond
phnbr8rx  HelveticaNeue-BoldExt
phnc8r    HelveticaNeue-Black
phnci8r   HelveticaNeue-BlackItalic
phnco8rc  HelveticaNeue-BlackCondObl
phnco8rx  HelveticaNeue-BlackExtObl
phncr8rc  HelveticaNeue-BlackCond
phncr8rx  HelveticaNeue-BlackExt
phnh8r    HelveticaNeue-Heavy
phnhi8r   HelveticaNeue-HeavyItalic
phnho8rc  HelveticaNeue-HeavyCondObl
phnho8rx  HelveticaNeue-HeavyExtObl
phnhr8rc  HelveticaNeue-HeavyCond
phnhr8rx  HelveticaNeue-HeavyExt
phnj8r    HelveticaNeue-UltraLight
phnji8r   HelveticaNeue-UltraLightItal
phnjo8rc  HelveticaNeue-UltraLigCondObl
phnjo8rx  HelveticaNeue-UltraLigExtObl
phnjr8rc  HelveticaNeue-UltraLigCond
phnjr8rx  HelveticaNeue-UltraLigExt
phnl8r    HelveticaNeue-Light
```

```
phnli8r  HelveticaNeue-LightItalic
phnlo8rc HelveticaNeue-LightCondObl
phnlo8rx HelveticaNeue-LightExtObl
phnlr8rc HelveticaNeue-LightCond
phnlr8rx HelveticaNeue-LightExt
phnm8r   HelveticaNeue-Medium
phnmi8r  HelveticaNeue-MediumItalic
phnmo8rc HelveticaNeue-MediumCondObl
phnmo8rx HelveticaNeue-MediumExtObl
phnmr8rc HelveticaNeue-MediumCond
phnmr8rx HelveticaNeue-MediumExt
phnr7a   HelveticaNeueEastA-Roman
phnr7at  HelveticaNeueEastA-Thin
phnr8r   HelveticaNeue-Roman
phnri8r  HelveticaNeue-Italic
phnro7a  HelveticaNeueEastA-RomanObl
phnro7at HelveticaNeueEastA-ThinObl
phnro8rc HelveticaNeue-CondensedObl
phnro8rx HelveticaNeue-ExtendedObl
phnrr8rc HelveticaNeue-Condensed
phnrr8rx HelveticaNeue-Extended
phnxo8rc HelveticaNeue-ExtBlackCondObl
phnxr8rc HelveticaNeue-ExtBlackCond
phrb8r   HelveticaRounded-Bold
phrbo8r  HelveticaRounded-BoldObl
phrbo8rc HelveticaRounded-BoldCondObl
phrbr8rc HelveticaRounded-BoldCond
phrc8r   HelveticaRounded-Black
phrco8r  HelveticaRounded-BlackObl
phvb7f   Helvetica-FractionBold
phvb8r   Helvetica-Bold
phvbk8r  HelveticaGreekP-Bold
phvbko8r HelveticaGreekP-BoldInclined
phvbo8r  Helvetica-BoldOblique
phvbo8rc Helvetica-Condensed-BoldObl
phvbo8rn Helvetica-Narrow-BoldOblique
phvboz8r HelveticaCyrillic-BoldIncl
phvbr8rc Helvetica-Condensed-Bold
phvbr8rn Helvetica-Narrow-Bold
phvbr8rp Helvetica-Compressed
phvbz8r  HelveticaCyrillic-Bold
phvc8r   Helvetica-Black
phvco8r  Helvetica-BlackOblique
phvco8rc Helvetica-Condensed-BlackObl
phvcr8rc Helvetica-Condensed-Black
phvl8r   Helvetica-Light
phvlo8r  Helvetica-LightOblique
phvlo8rc Helvetica-Condensed-LightObl
```

```
phvlr8rc Helvetica-Condensed-Light
phvr7f   Helvetica-Fraction
phvr8r   Helvetica
phvrk8r  HelveticaGreekP-Upright
phvrko8r HelveticaGreekP-Inclined
phvro8r  Helvetica-Oblique
phvro8rc Helvetica-Condensed-Oblique
phvro8rn Helvetica-Narrow-Oblique
phvroz8r HelveticaCyrillic-Inclined
phvrr8rc Helvetica-Condensed
phvrr8rn Helvetica-Narrow
phvrr8rq Helvetica-ExtraCompressed
phvrr8ru Helvetica-UltraCompressed
phvrz8r  HelveticaCyrillic-Upright
piar7a   Insignia-A
piar8r   Insignia
picr8r   Impact
pigb8r   SimonciniGaramond-Bold
pigr8r   SimonciniGaramond
pigri8r  SimonciniGaramond-Italic
pilb8r   Caecilia-Bold
pilbc8r  Caecilia-BoldSC
pilbci8r Caecilia-BoldItalicSC
pilbi8r  Caecilia-BoldItalic
pilh8r   Caecilia-Heavy
pilhc8r  Caecilia-HeavySC
pilhci8r Caecilia-HeavyItalicSC
pilhi8r  Caecilia-HeavyItalic
pill8r   Caecilia-Light
pillc8r  Caecilia-LightSC
pillci8r Caecilia-LightItalicSC
pilli8r  Caecilia-LightItalic
pilr8r   Caecilia-Roman
pilrc8r  Caecilia-RomanSC
pilrci8r Caecilia-ItalicSC
pilri8r  Caecilia-Italic
pimk8r   Imago-Book
pimki8r  Imago-BookItalic
piml8r   Imago-Light
pimli8r  Imago-LightItalic
pimm8r   Imago-Medium
pimmi8r  Imago-MediumItalic
pimx8r   Imago-ExtraBold
pimxi8r  Imago-ExtraBoldItalic
pinr7a   Industria-SolidA
pinr8r   Industria-Solid
pinrh7a  Industria-InlineA
pinrh8r  Industria-Inline
```

```
pipb8r    Impressum-Bold
pipr8r    Impressum-Roman
pipri8r   Impressum-Italic
pitb8r    Italia-Bold
pitk8r    Italia-Book
pitm8r    Italia-Medium
piwr8r    Ironwood
pjnb7d    JansonText-BoldOsF
pjnb8r    JansonText-Bold
pjnbi7d   JansonText-BoldItalicOsF
pjnbi8r   JansonText-BoldItalic
pjnr8r    JansonText-Roman
pjnrc8r   JansonText-RomanSC
pjnri7d   JansonText-ItalicOsF
pjnri8r   JansonText-Italic
pjpr8r    Juniper
pkbc8r    Kabel-Black
pkbh8r    Kabel-Heavy
pkbk8r    Kabel-Book
pkbl8r    Kabel-Light
pkrb8r    Korinna-Bold
pkrbi8r   Korinna-KursivBold
pkrr8r    Korinna-Regular
pkrri8r   Korinna-KursivRegular
pksb28r   KuenstlerScript-TwoBold
pksc8r    KuenstlerScript-Black
pksm8r    KuenstlerScript-Medium
pkub8r    Kaufmann-Bold
pkur8r    Kaufmann
plbd8r    LubalinGraph-Demi
plbdo8r   LubalinGraph-DemiOblique
plbk8r    LubalinGraph-Book
plbko8r   LubalinGraph-BookOblique
plcb8r    Lucida-Bold
plcbi8r   Lucida-BoldItalic
plcbs8r   LucidaSans-Bold
plcbsi8r  LucidaSans-BoldItalic
plcr8r    Lucida
plcri8r   Lucida-Italic
plcrm8r   LucidaMath-Italic
plcrs8r   LucidaSans
plcrsi8r  LucidaSans-Italic
plcrv8r   LucidaMath-Extension
plcry8r   LucidaMath-Symbol
plfb8r    Life-Bold
plfr8r    Life-Roman
plfri8r   Life-Italic
plgb8r    LetterGothic-Bold
```

```
plgbo8r   LetterGothic-BoldSlanted
plgr8r    LetterGothic
plgro8r   LetterGothic-Slanted
plnr8r    Linotext
plnrw8r   Linoscript
plob8r    Lithos-Bold
ploc8r    Lithos-Black
ploi8r    Lithos-ExtraLight
plol8r    Lithos-Light
plor8r    Lithos-Regular
plsr8r    DINMittelschrift
plwb8r    Leawood-Bold
plwbi8r   Leawood-BoldItalic
plwc8r    Leawood-Black
plwci8r   Leawood-BlackItalic
plwk8r    Leawood-Book
plwki8r   Leawood-BookItalic
plwm8r    Leawood-Medium
plwmi8r   Leawood-MediumItalic
pmdb8r    Meridien-Bold
pmdbi8r   Meridien-BoldItalic
pmdm8r    Meridien-Medium
pmdmi8r   Meridien-MediumItalic
pmdr8r    Meridien-Roman
pmdri8r   Meridien-Italic
pmhb8r    Machine-Bold
pmhr8r    Machine
pmirw8r   MediciScript
pmlb8r    Melior-Bold
pmlbi8r   Melior-BoldItalic
pmlr8r    Melior
pmlri8r   Melior-Italic
pmnb8r    Minion-Bold
pmnb8x    MinionExp-Bold
pmnbi8r   Minion-BoldItalic
pmnbi8x   MinionExp-BoldItalic
pmnc8r    Minion-Black
pmnc8x    MinionExp-Black
pmnr8r    Minion-Regular
pmnr8x    MinionExp-Regular
pmnrd8r   Minion-DisplayRegular
pmnrd8x   MinionExp-DisplayRegular
pmnrdi8r  Minion-DisplayItalic
pmnrdi8x  MinionExp-DisplayItalic
pmnri8r   Minion-Italic
pmnri8x   MinionExp-Italic
pmnrp8r   Minion-Ornaments
pmnrwdi8r Minion-SwashDisplayItalic
```

```
pmnrwi8r  Minion-SwashItalic
pmns8r    Minion-Semibold
pmns8x    MinionExp-Semibold
pmnsi8r   Minion-SemiboldItalic
pmnsi8x   MinionExp-SemiboldItalic
pmnswi8r  Minion-SwashSemiboldItalic
pmpb8r    Memphis-Bold
pmpbi8r   Memphis-BoldItalic
pmpl8r    Memphis-Light
pmpli8r   Memphis-LightItalic
pmpm8r    Memphis-Medium
pmpmi8r   Memphis-MediumItalic
pmpx8r    Memphis-ExtraBold
pmqr8r    Mesquite
pmrr8r    Madrone
pmsr8r    Mistral
pmtb8r    Minister-Bold
pmtbi8r   Minister-BoldItalic
pmtc8r    Minister-Black
pmtci8r   Minister-BlackItalic
pmtk8r    Minister-Book
pmtki8r   Minister-BookItalic
pmtl8r    Minister-Light
pmtli8r   Minister-LightItalic
pmxr8r    Maximus
pnab8r    NewAster-Bold
pnabi8r   NewAster-BoldItalic
pnac8r    NewAster-Black
pnaci8r   NewAster-BlackItalic
pnar8r    NewAster
pnari8r   NewAster-Italic
pnas8r    NewAster-SemiBold
pnasi8r   NewAster-SemiBoldItalic
pnbb8r    NewBaskerville-Bold
pnbbc8r   NewBaskerville-BoldSC
pnbbi7d   NewBaskerville-BoldItalicOsF
pnbbi8r   NewBaskerville-BoldItalic
pnbr8r    NewBaskerville-Roman
pnbrc8r   NewBaskerville-SC
pnbri7d   NewBaskerville-ItalicOsF
pnbri8r   NewBaskerville-Italic
pncb7f    NewCenturySchlbk-FractionBold
pncb8r    NewCenturySchlbk-Bold
pncbi8r   NewCenturySchlbk-BoldItalic
pncbk8r   NewCenturySchlbkGreek-Bd
pncr7f    NewCenturySchlbk-Fraction
pncr8r    NewCenturySchlbk-Roman
pncri8r   NewCenturySchlbk-Italic
```

```
pncrik8r  NewCenturySchlbkGreek-Ic
pncrk8r   NewCenturySchlbkGreek-Up
pndb8r    NewCaledonia-Bold
pndbc8r   NewCaledonia-BoldSC
pndbi7d   NewCaledonia-BoldItalicOsF
pndbi8r   NewCaledonia-BoldItalic
pndc8r    NewCaledonia-Black
pndci8r   NewCaledonia-BlackItalic
pndr8r    NewCaledonia
pndrc8r   NewCaledonia-SC
pndri7d   NewCaledonia-ItalicOsF
pndri8r   NewCaledonia-Italic
pnds8r    NewCaledonia-SemiBold
pndsi8r   NewCaledonia-SemiBoldItalic
pnfb8r    Nofret-Bold
pnfbi8r   Nofret-BoldItalic
pnfl8r    Nofret-Light
pnfli8r   Nofret-LightItalic
pnfm8r    Nofret-Medium
pnfmi8r   Nofret-MediumItalic
pnfr8r    Nofret-Regular
pnfri8r   Nofret-Italic
pngb8r    NewsGothic-Bold
pngbo8r   NewsGothic-BoldOblique
pngr8r    NewsGothic
pngro8r   NewsGothic-Oblique
pnsb8r    TimesNewRomanPS-Bold
pnsbi8r   TimesNewRomanPS-BoldItalic
pnsr8r    TimesNewRomanPS
pnsri8r   TimesNewRomanPS-Italic
pnurw8r   NuptialScript
pnvb8r    Novarese-Bold
pnvbi8r   Novarese-BoldItalic
pnvk8r    Novarese-Book
pnvki8r   Novarese-BookItalic
pnvm8r    Novarese-Medium
pnvmi8r   Novarese-MediumItalic
pnvu8r    Novarese-Ultra
pnzh8r    NeuzeitS-BookHeavy
pnzk8r    NeuzeitS-Book
po7r8r    OldStyleSeven
po7rc8r   OldStyleSeven-SC
po7ri7d   OldStyleSeven-ItalicOsF
po7ri8r   OldStyleSeven-Italic
poar8r    OCRA
pobr8r    OCRB
pocb8r    Concorde-Bold
pocbi8r   Concorde-BoldItalic
```

```
pocr8r    Concorde-Roman
pocri8r   Concorde-Italic
pomr8r    Omnia
ponb8r    Corona-Bold
ponr8r    Corona
ponri8r   Corona-Italic
popb8r    Optima-Bold
popbo8r   Optima-BoldOblique
popr8r    Optima
popro8r   Optima-Oblique
porr8r    Orator
porro8r   Orator-Slanted
poyb8r    Olympian-Bold
poybi8r   Olympian-BoldItalic
poyr8r    Olympian
poyri8r   Olympian-Italic
pp0r8r    Poplar
ppar8r    ParkAvenue
ppeb8r    PrestigeElite-Bold
ppebo8r   PrestigeElite-BoldSlanted
pper8r    PrestigeElite
ppero8r   PrestigeElite-Slanted
ppgb8r    Peignot-Bold
ppgd8r    Peignot-Demi
ppgl8r    Peignot-Light
ppi001    BorderPi-OneFiveOneFiveNine
ppi002    BundesbahnPi-One
ppi003    BundesbahnPi-Two
ppi004    BundesbahnPi-Three
ppi005    EuropeanPi-Four
ppi006    EuropeanPi-One
ppi007    EuropeanPi-Three
ppi008    EuropeanPi-Two
ppi009    LAstrologyPi-One
ppi010    LAstrologyPi-Two
ppi011    LDecorationPi-One
ppi012    LDecorationPi-Two
ppi013    LGamePi-ChessDraughts
ppi014    LGamePi-DiceDominoes
ppi015    LGamePi-EnglishCards
ppi016    LGamePi-FrenchCards
ppi017    LHolidayPi-One
ppi018    LHolidayPi-Two
ppi019    LHolidayPi-Three
ppi020    MathematicalPi-One
ppi021    MathematicalPi-Two
ppi022    MathematicalPi-Three
ppi023    MathematicalPi-Four
```

```
ppi024   MathematicalPi-Five
ppi025   MathematicalPi-Six
ppi026   WoodtypeOrnaments-One
ppi027   WoodtypeOrnaments-Two
pplb7d   Palatino-BoldOsF
pplb8r   Palatino-Bold
pplbi7d  Palatino-BoldItalicOsF
pplbi8r  Palatino-BoldItalic
pplr8r   Palatino-Roman
pplrc8r  Palatino-SC
pplri7d  Palatino-ItalicOsF
pplri8r  Palatino-Italic
ppnb8r   Plantin-Bold
ppnb8x   PlantinExpert-Bold
ppnbi8r  Plantin-BoldItalic
ppnbi8x  PlantinExpert-BoldItalic
ppnbr8rc Plantin-BoldCondensed
ppnl8r   Plantin-Light
ppnli8r  Plantin-LightItalic
ppnr8r   Plantin
ppnr8x   PlantinExpert
ppnri8r  Plantin-Italic
ppnri8x  PlantinExpert-Italic
ppns8r   Plantin-Semibold
ppnsi8r  Plantin-SemiboldItalic
ppor8r   Ponderosa
pppb8r   Perpetua-Bold
pppbi8r  Perpetua-BoldItalic
pppr8r   Perpetua
pppri8r  Perpetua-Italic
ppqb8r   PostAntiqua-Bold
ppqr8r   PostAntiqua-Roman
ppsr8r   Parisian
pptr8r   Present
ppxb8r   PopplPontifex-Bold
ppxbr8rc PopplPontifex-BoldCondensed
ppxc8r   PopplPontifex-Black
ppxr8r   PopplPontifex-Roman
ppxr8rc  PopplPontifex-RomanSC
ppxri8r  PopplPontifex-Italic
pqrb8r   Quorum-Bold
pqrc8r   Quorum-Black
pqrk8r   Quorum-Book
pqrl8r   Quorum-Light
pqrm8r   Quorum-Medium
pr1b8r   RotisSemiSerif-Bold
pr1bs8r  RotisSemiSans-Bold
pr1lis8r RotisSemiSans-LightItalic
```

```
pr1ls8r  RotisSemiSans-Light
pr1r8r   RotisSemiSerif
pr1ris8r RotisSemiSans-Italic
pr1rs8r  RotisSemiSans
pr1xs8r  RotisSemiSans-ExtraBold
prab8r   Raleigh-Bold
prad8r   Raleigh-DemiBold
pram8r   Raleigh-Medium
prar8r   Raleigh
prob8r   RotisSerif-Bold
probs8r  RotisSansSerif-Bold
prolis8r RotisSansSerif-LightItalic
prols8r  RotisSansSerif-Light
pror8r   RotisSerif
prori8r  RotisSerif-Italic
proris8r RotisSansSerif-Italic
prors8r  RotisSansSerif
proxs8r  RotisSansSerif-ExtraBold
prpr28r  Reporter-Two
prqr8r   RussellSquare
prqro8r  RussellSquare-Oblique
prtr8r   Carta
prvr8r   Revue
prwb8r   Rockwell-Bold
prwbi8r  Rockwell-BoldItalic
prwbr8rc Rockwell-BoldCondensed
prwl8r   Rockwell-Light
prwli8r  Rockwell-LightItalic
prwr8r   Rockwell
prwri8r  Rockwell-Italic
prwrr8rc Rockwell-Condensed
prwx8r   Rockwell-ExtraBold
ps0r7c8r SanMarco-Dfr
ps0r8r   SanMarco
ps7rp    Sassoon-Primary
psbb7d   Sabon-BoldOsF
psbb8r   Sabon-Bold
psbbi7d  Sabon-BoldItalicOsF
psbbi8r  Sabon-BoldItalic
psbr8r   Sabon-Roman
psbrc8r  Sabon-RomanSC
psbri7d  Sabon-ItalicOsF
psbri8r  Sabon-Italic
pscb8r   Slimbach-Bold
pscbi8r  Slimbach-BoldItalic
pscc8r   Slimbach-Black
pscci8r  Slimbach-BlackItalic
psck8r   Slimbach-Book
```

```
pscki8r   Slimbach-BookItalic
pscm8r    Slimbach-Medium
pscmi8r   Slimbach-MediumItalic
psfb8r    Serifa-Bold
psfc8r    Serifa-Black
psfl8r    Serifa-Light
psfli8r   Serifa-LightItalic
psfr8r    Serifa-Roman
psfri8r   Serifa-Italic
psgb8r    SerifGothic-Bold
psgc8r    SerifGothic-Black
psgh8r    SerifGothic-Heavy
psgl8r    SerifGothic-Light
psgr8r    SerifGothic
psgx8r    SerifGothic-ExtraBold
pshb8r    Shannon-Bold
pshk8r    Shannon-Book
pshro8r   Shannon-Oblique
pshx8r    Shannon-ExtraBold
pslr8r    Stencil
psnh8r    Spartan-HeavyClassified
psnk8r    Spartan-BookClassified
psor8r    Sonata
pspb8r    Serpentine-Bold
pspbo8r   Serpentine-BoldOblique
pspl8r    Serpentine-Light
psplo8r   Serpentine-LightOblique
pspm8r    Serpentine-Medium
pspmo8r   Serpentine-MediumOblique
psrbw8r   SnellRoundhand-BoldScript
psrcw8r   SnellRoundhand-BlackScript
psrrw8r   SnellRoundhand-Script
pssb8r    StempelSchneidler-Bold
pssbi8r   StempelSchneidler-BoldItalic
pssc8r    StempelSchneidler-Black
pssci8r   StempelSchneidler-BlackItalic
pssl8r    StempelSchneidler-Light
pssli8r   StempelSchneidler-LightItalic
pssm8r    StempelSchneidler-Medium
pssmi8r   StempelSchneidler-MedItalic
pssr8r    StempelSchneidler-Roman
pssri8r   StempelSchneidler-Italic
pstb8r    StoneSerif-Bold
pstbi8r   StoneSerif-BoldItalic
pstbin8r  StoneInformal-BoldItalic
pstbis8r  StoneSans-BoldItalic
pstbn8r   StoneInformal-Bold
pstbs8r   StoneSans-Bold
```

```
pstr5a   StoneSerif-PhoneticAlternate
pstr5i   StoneSerif-PhoneticIPA
pstr8r   StoneSerif
pstri8r  StoneSerif-Italic
pstrin8r StoneInformal-Italic
pstris8r StoneSans-Italic
pstrn8r  StoneInformal
pstrs5a  StoneSans-PhoneticAlternate
pstrs5i  StoneSans-PhoneticIPA
pstrs8r  StoneSans
psts8r   StoneSerif-Semibold
pstsi8r  StoneSerif-SemiboldItalic
pstsin8r StoneInformal-SemiboldItalic
pstsis8r StoneSans-SemiboldItalic
pstsn8r  StoneInformal-Semibold
pstss8r  StoneSans-Semibold
psvb8r   Souvenir-Bold
psvbi8r  Souvenir-BoldItalic
psvd8r   Souvenir-Demi
psvdi8r  Souvenir-DemiItalic
psvl8r   Souvenir-Light
psvli8r  Souvenir-LightItalic
psvm8r   Souvenir-Medium
psvmi8r  Souvenir-MediumItalic
psxb8r   Syntax-Bold
psxc8r   Syntax-Black
psxr8r   Syntax-Roman
psxri8r  Syntax-Italic
psxu8r   Syntax-UltraBlack
psyb     Symbol-Bold
psybi    Symbol-BoldItalic
psyc     Symbol-Black
psyci    Symbol-BlackItalic
psyk     Symbol-Book
psyki    Symbol-BookItalic
psym     Symbol-Medium
psymi    Symbol-MediumItalic
psyr     Symbol
ptbb8r   BBodoni-Bold
ptbbi8r  BBodoni-BoldItalic
ptbl8r   BBodoni-Light
ptbli8r  BBodoni-LightItalic
ptbm8r   BBodoni-Medium
ptbmi8r  BBodoni-MediumItalic
ptbr8r   BBodoni-Regular
ptbri8r  BBodoni-Italic
pteb8r   TimesEuropa-Bold
ptebi8r  TimesEuropa-BoldItalic
```

```
pter8r    TimesEuropa-Roman
pteri8r   TimesEuropa-Italic
ptfd8r    Tiffany-Demi
ptfdi8r   Tiffany-DemiItalic
ptfh8r    Tiffany-Heavy
ptfhi8r   Tiffany-HeavyItalic
ptfr8r    Tiffany
ptfri8r   Tiffany-Italic
ptgb28r   TradeGothic-BoldTwo
ptgb2o8r  TradeGothic-BoldTwoOblique
ptgb8r    TradeGothic-Bold
ptgb8r20c TradeGothic-BoldCondTwenty
ptgb8r20o TradeGothic-BoldCondTwentyObl
ptgbo8r   TradeGothic-BoldOblique
ptgl8r    TradeGothic-Light
ptglo8r   TradeGothic-LightOblique
ptgr188rc TradeGothic-CondEighteen
ptgr18o8r TradeGothic-CondEighteenObl
ptgr8r    TradeGothic
ptgro8r   TradeGothic-Oblique
ptjb8r    Trajan-Bold
ptjr8r    Trajan-Regular
ptkb8r    Tekton-Bold
ptkbo8r   Tekton-BoldOblique
ptkr8r    Tekton
ptkro8r   Tekton-Oblique
ptmb10    TimesTen-Bold
ptmb7a10  TimesTenEastA-Bold
ptmb7d10  TimesTen-BoldOsF
ptmb7di10 TimesTen-BoldItalicOsF
ptmb8r    Times-Bold
ptmbc8r   Times-BoldSC
ptmbi10   TimesTen-BoldItalic
ptmbi7a10 TimesTenEastA-BoldItalic
ptmbi7d   Times-BoldItalicOsF
ptmbi8r   Times-BoldItalic
ptmbk10   TimesTenGreekP-Bold
ptmbko10  TimesTenGreekP-BoldInclined
ptmboz10  TimesTenCyrillic-BoldInclined
ptmbz10   TimesTenCyrillic-Bold
ptmr10    TimesTen-Roman
ptmr7a10  TimesTenEastA-Roman
ptmr7di10 TimesTen-ItalicOsF
ptmr8r    Times-Roman
ptmrc10   TimesTen-RomanSC
ptmrc8r   Times-RomanSC
ptmri10   TimesTen-Italic
ptmri7a10 TimesTenEastA-Italic
```

```
ptmri7d  Times-ItalicOsF
ptmri8r  Times-Italic
ptmrk10  TimesTenGreekP-Upright
ptmrko10 TimesTenGreekP-Inclined
ptmroz10 TimesTenCyrillic-Inclined
ptmrz10  TimesTenCyrillic-Upright
ptms8r   Times-Semibold
ptmsi8r  Times-SemiboldItalic
ptmx8r   Times-ExtraBold
ptphi8rc Tempo-HeavyCondensedItalic
ptphr8rc Tempo-HeavyCondensed
ptvb7d   TrumpMediaeval-BoldOsF
ptvb8r   TrumpMediaeval-Bold
ptvbi7d  TrumpMediaeval-BoldItalicOsF
ptvbi8r  TrumpMediaeval-BoldItalic
ptvr8r   TrumpMediaeval-Roman
ptvrc8r  TrumpMediaeval-SC
ptvri7d  TrumpMediaeval-ItalicOsF
ptvri8r  TrumpMediaeval-Italic
pubb7d   BauerBodoni-BoldOsF
pubb8r   BauerBodoni-Bold
pubbi7d  BauerBodoni-BoldItalicOsF
pubbi8r  BauerBodoni-BoldItalic
pubbr8rc BauerBodoni-BoldCond
pubc8r   BauerBodoni-Black
pubci8r  BauerBodoni-BlackItalic
pubcr8rc BauerBodoni-BlackCond
pubr8r   BauerBodoni-Roman
pubrc8r  BauerBodoni-RomanSC
pubri7d  BauerBodoni-ItalicOsF
pubri8r  BauerBodoni-Italic
pugb8r   BenguiatGothic-Bold
pugbo8r  BenguiatGothic-BoldOblique
pugh8r   BenguiatGothic-Heavy
pugho8r  BenguiatGothic-HeavyOblique
pugk8r   BenguiatGothic-Book
pugko8r  BenguiatGothic-BookOblique
pugm8r   BenguiatGothic-Medium
pugmo8r  BenguiatGothic-MediumOblique
puhb8r   Cushing-Bold
puhbi8r  Cushing-BoldItalic
puhh8r   Cushing-Heavy
puhhi8r  Cushing-HeavyItalic
puhk8r   Cushing-Book
puhki8r  Cushing-BookItalic
puhm8r   Cushing-Medium
puhmi8r  Cushing-MediumItalic
pulrk8r  Universal-GreekwithMathPi
```

```
pumr8r   Umbra
punaro8r Univers-ThinUltraCondensed
punb8r   Univers-Bold
punbo8r  Univers-BoldOblique
punbo8rc Univers-CondensedBoldOblique
punbo8rx Univers-BoldExtObl
punbr8rc Univers-CondensedBold
punbr8rx Univers-BoldExt
punc8r   Univers-Black
punco8r  Univers-BlackOblique
punco8rx Univers-BlackExtObl
puncr8rx Univers-BlackExt
punl8r   Univers-Light
punlo8r  Univers-LightOblique
punlo8rc Univers-CondensedLightOblique
punlr8rc Univers-CondensedLight
punlro8r Univers-LightUltraCondensed
punr8r   Univers
punro8r  Univers-Oblique
punro8rc Univers-CondensedOblique
punro8rx Univers-ExtendedObl
punrr8rc Univers-Condensed
punrr8rx Univers-Extended
punrro8r Univers-UltraCondensed
punx8r   Univers-ExtraBlack
punxo8r  Univers-ExtraBlackObl
punxo8rx Univers-ExtraBlackExtObl
punxr8rx Univers-ExtraBlackExt
putb8r   Utopia-Bold
putb8x   UtopiaExp-Bold
putbi8r  Utopia-BoldItalic
putbi8x  UtopiaExp-BoldItalic
putc8r   Utopia-Black
putc8x   UtopiaExp-Black
putr8r   Utopia-Regular
putr8x   UtopiaExp-Regular
putrd8r  Utopia-Titling
putri8r  Utopia-Italic
putri8x  UtopiaExp-Italic
putrp8r  Utopia-Ornaments
puts8r   Utopia-Semibold
puts8x   UtopiaExp-Semibold
putsi8r  Utopia-SemiboldItalic
putsi8x  UtopiaExp-SemiboldItalic
puwb8r   Usherwood-Bold
puwbi8r  Usherwood-BoldItalic
puwc8r   Usherwood-Black
puwci8r  Usherwood-BlackItalic
```

```
puwk8r   Usherwood-Book
puwki8r  Usherwood-BookItalic
puwm8r   Usherwood-Medium
puwmi8r  Usherwood-MediumItalic
puyr8r   UniversityRoman
pvjb8r   Veljovic-Bold
pvjbi8r  Veljovic-BoldItalic
pvjc8r   Veljovic-Black
pvjci8r  Veljovic-BlackItalic
pvjk8r   Veljovic-Book
pvjki8r  Veljovic-BookItalic
pvjm8r   Veljovic-Medium
pvjmi8r  Veljovic-MediumItalic
pvlb8r   Versailles-Bold
pvlbi8r  Versailles-BoldItalic
pvlc8r   Versailles-Black
pvlci8r  Versailles-BlackItalic
pvll8r   Versailles-Light
pvlli8r  Versailles-LightItalic
pvlr8r   Versailles-Roman
pvlri8r  Versailles-Italic
pvra8r   VAGRounded-Thin
pvrb8r   VAGRounded-Bold
pvrc8r   VAGRounded-Black
pvrl8r   VAGRounded-Light
pwbb7d   Walbaum-BoldOsF
pwbb8r   Walbaum-Bold
pwbbi7d  Walbaum-BoldItalicOsF
pwbbi8r  Walbaum-BoldItalic
pwbr8r   Walbaum-Roman
pwbrc8r  Walbaum-RomanSC
pwbri7d  Walbaum-ItalicOsF
pwbri8r  Walbaum-Italic
pwdb8r   Weidemann-Bold
pwdbi8r  Weidemann-BoldItalic
pwdc8r   Weidemann-Black
pwdci8r  Weidemann-BlackItalic
pwdk8r   Weidemann-Book
pwdki8r  Weidemann-BookItalic
pwdm8r   Weidemann-Medium
pwdmi8r  Weidemann-MediumItalic
pwgr7c   WilhelmKlingsporGotisch-Dfr
pwgr8r   WilhelmKlingsporGotisch
pwkb8r   Wilke-Bold
pwkbi8r  Wilke-BoldItalic
pwkc8r   Wilke-Black
pwkci8r  Wilke-BlackItalic
pwkr8r   Wilke-Roman
```

```
pwkri8r   Wilke-Italic
pwsb8r    Weiss-Bold
pwsr8r    Weiss
pwsri8r   Weiss-Italic
pwsx8r    Weiss-ExtraBold
pwwr8r    Willow
pzcb8r    ZapfChancery-Bold
pzcd8r    ZapfChancery-Demi
pzcl8r    ZapfChancery-Light
pzcli8r   ZapfChancery-LightItalic
pzcmi8r   ZapfChancery-MediumItalic
pzcr8r    ZapfChancery-Roman
pzcri8r   ZapfChancery-Italic
pzdr      ZapfDingbats
pzgbr8rc  DINNeuzeitGrotesk-BoldCond
pzgl8r    DINNeuzeitGrotesk-Light
zpcp29ab        Copperplate-TwentyNineAB
zpcp29bc        Copperplate-TwentyNineBC
zpcp30ab        Copperplate-ThirtyAB
zpcp30bc        Copperplate-ThirtyBC
zpcp31ab        Copperplate-ThirtyOneAB
zpcp31bc        Copperplate-ThirtyOneBC
zpcp32ab        Copperplate-ThirtyTwoAB
zpcp32bc        Copperplate-ThirtyTwoBC
zpcp33bc        Copperplate-ThirtyThreeBC
zpgbm7h   GothicBBB-Medium-78-H
zpgbm7v   GothicBBB-Medium-78-V
zpgbm8rh  GothicBBB-Medium-83pv-RKSJ-H
zpgbmah   GothicBBB-Medium-Add-H
zpgbmav   GothicBBB-Medium-Add-V
zpgbmeh   GothicBBB-Medium-Ext-H
zpgbmev   GothicBBB-Medium-Ext-V
zpgbmh    GothicBBB-Medium-H
zpgbmv    GothicBBB-Medium-V
zpmicr    MICR
zpryl7h   Ryumin-Light-78-H
zpryl7v   Ryumin-Light-78-V
zpryl8rh  Ryumin-Light-83pv-RKSJ-H
zprylah   Ryumin-Light-Add-H
zprylav   Ryumin-Light-Add-V
zpryleh   Ryumin-Light-Ext-H
zprylev   Ryumin-Light-Ext-V
zprylh    Ryumin-Light-H
zprylv    Ryumin-Light-V
zpshals   Shelley-AllegroScript
zpshans   Shelley-AndanteScript
zpshvos   Shelley-VolanteScript
zpsrliolh SerlioLH
```

```
zpulrncp Universal-NewswithCommPi
```

A.3 Apple fonts

The 'apple.map' file has abbreviations for Apple fonts.

```
eecr8r    AppleChancery
eger8r    Geneva
ehtr8r    HoeflerText
emcr8r    Monaco
epi001    Zeal
eskr8r    Skia
```

A.4 Bitstream fonts

The 'bitstrea.map' file has abbreviations for Bitstream fonts.

```
ba3r8r    AdLibBT-Regular                             1154a
ba4r8r    AlternateGothicNo2BT-Regular                0542a
ba5r8r    AllegroBT-Regular                           1138a
ba6r8r    AmeliaBT-Regular                            0510a
ba7r8r    AmericanTextBT-Regular                      0211a
ba8b8rc   AuroraBT-BoldCondensed                      1028a
ba9b8r    Humanist970BT-BoldC                         0265a
ba9r8r    Humanist970BT-RomanC                        0264a
baab8r    AachenBT-Bold                               1103a
baar8r    AachenBT-Roman                              1102a
balb8r    Flareserif821BT-Bold                        0918a
ball8r    Flareserif821BT-Light                       0916a
balr8r    Flareserif821BT-Roman                       0917a
bamb8r    AmericanaBT-Bold                            0500a
bamr8r    AmericanaBT-Roman                           0498a
bamri8r   AmericanaBT-Italic                          0499a
bamx8r    AmericanaBT-ExtraBold                       0501a
bamx8rc   AmericanaBT-ExtraBoldCondensed              0502a
baob8r    Incised901BT-Bold                           0390a
baob8rc   Incised901BT-BoldCondensed                  0467a
baoc8r    Incised901BT-Black                          0391a
baoh8rx   Incised901BT-Nord                           0469a
baohi8rx  Incised901BT-NordItalic                     0470a
baol8r    Incised901BT-Light                          0387a
baop8r    Incised901BT-Compact                        0468a
baor8r    Incised901BT-Roman                          0388a
baori8r   Incised901BT-Italic                         0389a
baub8r    Freeform721BT-Bold                          0999a
baubi8r   Freeform721BT-BoldItalic                    1000a
bauc8r    Freeform721BT-Black                         1001a
bauci8r   Freeform721BT-BlackItalic                   1002a
```

baur8r	Freeform721BT-Roman	0997a
bauri8r	Freeform721BT-Italic	0998a
bazb8r	Gothic725BT-BoldA	0541a
bazc8r	Gothic725BT-BlackA	1007a
bb4r8r	Brush738BT-RegularA	0806a
bb5r8r	Freehand591BT-RegularA	1043a
bb6r8rc	Gothic821CondensedBT-Regular	0807a
bb7b8r	BernhardModernBT-Bold	0838a
bb7b8rc	BernhardBoldCondensedBT-Regular	1003a
bb7bi8r	BernhardModernBT-BoldItalic	0839a
bb7r8r	BernhardModernBT-Roman	0607a
bb7ri8r	BernhardModernBT-Italic	0837a
bb7rn8r	BernhardFashionBT-Regular	1051a
bb7rw8r	BernhardTangoBT-Regular	0986a
bb8c8r	BlippoBT-Black	0511a
bb9b8r	BremenBT-Bold	1231a
bb9c8r	BremenBT-Black	1232a
bbbb8a	Aldine401BT-BoldA	0304a
bbbbi8a	Aldine401BT-BoldItalicA	0305a
bbbr8a	Aldine401BT-RomanA	0302a
bbbri8a	Aldine401BT-ItalicA	0303a
bbdb8r	BodoniBT-Bold	0037a
bbdb8rc	BodoniBT-BoldCondensed	0973a
bbdbi8r	BodoniBT-BoldItalic	0038a
bbdk8r	BodoniBT-Book	0035a
bbdki8r	BodoniBT-BookItalic	0036a
bbdp8r	PosterBodoniBT-Roman	0129a
bbdpi8r	PosterBodoniBT-Italic	0130a
bbdr8r	BodoniBT-Roman	0055a
bbdri8r	BodoniBT-Italic	0056a
bblb8r	BelweBT-Bold	1024a
bbll8r	BelweBT-Light	1022a
bblm8r	BelweBT-Medium	1023a
bblr8rc	BelweBT-RomanCondensed	1025a
bbob8r	BalloonBT-Bold	0728a
bbol8r	BalloonBT-Light	0121a
bbox8r	BalloonBT-ExtraBold	0729a
bbpr8r	Modern735BT-RomanA	0793a
bbrb8r	Revival565BT-Bold	1070a
bbrbi8r	Revival565BT-BoldItalic	1071a
bbrr8r	Revival565BT-Roman	1068a
bbrri8r	Revival565BT-Italic	1069a
bbsr8r	BakerSignetBT-Roman	1152a
bburw8r	BrushScriptBT-Regular	0199a
bbwr8r	BroadwayBT-Regular	0131a
bbwre8r	BroadwayEngravedBT-Regular	0802a
bc5r8r	Caslon540BT-Roman	0118a
bc5ri8r	Caslon540BT-Italic	0119a

```
bc7b8r    CompactaBT-Bold                           0786a
bc7bi8r   CompactaBT-BoldItalic                     0787a
bc7c8r    CompactaBT-Black                          0788a
bc7r8r    CompactaBT-Roman                          0784a
bc7ri8r   CompactaBT-Italic                         0785a
bc9r8r    Calligraphic421BT-RomanB                  1139a
bcab8r    CaslonBT-Bold                             0443a
bcabi8r   CaslonBT-BoldItalic                       0444a
bcarl8r   CaslonOpenfaceBT-Regular                  0581a
bcbb8r    CooperBT-Bold                             0579a
bcbbi8r   CooperBT-BoldItalic                       0580a
bcbbl8r   CooperBT-BlackOutline                     1034a
bcbc8r    CooperBT-Black                            0630a
bcbci8r   CooperBT-BlackItalic                      0631a
bcbcil8r  CooperBT-BlackItalicHeadline              0232a
bcbcl8r   CooperBT-BlackHeadline                    0231a
bcbl8r    CooperBT-Light                            0575a
bcbli8r   CooperBT-LightItalic                      0576a
bcbm8r    CooperBT-Medium                           0577a
bcbmi8r   CooperBT-MediumItalic                     0578a
bccr8r    Freehand471BT-Regular                     0418a
bcdb8r    ClarendonBT-Bold                          0284a
bcdb8rc   ClarendonBT-BoldCondensed                 0228a
bcdc8r    ClarendonBT-Black                         0351a
bcdh8r    ClarendonBT-Heavy                         0416a
bcdl8r    ClarendonBT-Light                         0282a
bcdr8r    ClarendonBT-Roman                         0283a
bcdr8rc   ClarendonBT-RomanCondensed                0846a
bchb8r    CharterBT-Bold
bchbi8r   CharterBT-BoldItalic
bchr8r    CharterBT-Roman
bchri8r   CharterBT-Italic
bclc8r    CloisterBlackBT-Regular                   0757a
bcnb8rx     CenturyExpandedBT-Bold                    0041a
bcnbi8rx  CenturyExpandedBT-BoldItalic              0042a
bcnr8rx   CenturyExpandedBT-Roman                   0039a
bcnri8rx  CenturyExpandedBT-Italic                  0040a
bcpbs8r   CopperplateGothicBT-Bold                  0421a
bcpbs8rc  CopperplateGothicBT-BoldCond              0424a
bcphs8r   CopperplateGothicBT-Heavy                 0422a
bcprs8r   CopperplateGothicBT-Roman                 0420a
bcprs8rc  CopperplateGothicBT-RomanCond             0423a
bcsb8r    CenturySchoolbookBT-Bold                  0085a
bcsb8rc   CenturySchoolbookBT-BoldCond              0574a
bcsbi8r   CenturySchoolbookBT-BoldItalic            0086a
bcsr8r    CenturySchoolbookBT-Roman                 0083a
bcsri8r   CenturySchoolbookBT-Italic                0084a
bcsrt8r   CenturySchoolbookBT-Monospace             0600a
```

```
bctb8r    CheltenhamBT-Bold                          0622a
bctb8rc   CheltenhamBT-BoldCondensed                 1065a
bctb8rq   CheltenhamBT-BoldExtraCondensed            1067a
bctbd8r   CheltenhamBT-BoldHeadline                  0508a
bctbdi8r  CheltenhamBT-BoldItalicHeadline            0509a
bctbi8r   CheltenhamBT-BoldItalic                    0623a
bctbi8rc  CheltenhamBT-BoldCondItalic                1066a
bctr8r    CheltenhamBT-Roman                         0620a
bctri8r   CheltenhamBT-Italic                        0621a
bcub8r    CenturyOldstyleBT-Bold                     0287a
bcur8r    CenturyOldstyleBT-Roman                    0285a
bcuri8r   CenturyOldstyleBT-Italic                   0286a
bcyb8r    SquareSlabserif711BT-Bold                  0412a
bcyl8r    SquareSlabserif711BT-Light                 0410a
bcym8r    SquareSlabserif711BT-Medium                0411a
bczr8r    Staccato555BT-RegularA                     1153a
bd0b8r    DavidaBoldBT-Regular                       0195a
bdcb8r    DomBoldBT-Regular                          0769a
bdcbi8r   DomDiagonalBT-Bold                         0921a
bdcr8r    DomCasualBT-Regular                        0604a
bdcri8r   DomDiagonalBT-Regular                      0920a
bdeb8r    DellaRobbiaBT-Bold                         1113a
bder8r    DellaRobbiaBT-Roman                        1112a
bdir8r    Calligraphic810BT-Roman                    0811a
bdiri8r   Calligraphic810BT-Italic                   0812a
be0r8r    EmbassyBT-Regular                          0588a
be1r8r    EmpireBT-Regular                           1176a
beab8r    Transitional521BT-BoldA                    0915a
bear8r    Transitional521BT-RomanA                   0913a
bearw8r   Transitional521BT-CursiveA                 0914a
beeb8r    Egyptian505BT-Bold                         0964a
beel8r    Egyptian505BT-Light                        0961a
beem8r    Egyptian505BT-Medium                       0963a
beer8r    Egyptian505BT-Roman                        0962a
begb8r    OriginalGaramondBT-Bold                    0865a
begbi8r   OriginalGaramondBT-BoldItalic              0866a
begr8r    OriginalGaramondBT-Roman                   0863a
begri8r   OriginalGaramondBT-Italic                  0864a
bekr8r    Freeform710BT-Regular                      0714a
benb8r    EngraversRomanBT-Bold                      0974a
benbf8r   EngraversOldEnglishBT-Bold                 1045a
benr8r    EngraversRomanBT-Regular                   0587a
benrf8r   EngraversOldEnglishBT-Regular              0212a
benrs8r   EngraversGothicBT-Regular                  0586a
beob8a    AmerigoBT-BoldA                            0645a
beobi8a   AmerigoBT-BoldItalicA                      0772a
beom8a    AmerigoBT-MediumA                          0770a
beomi8a   AmerigoBT-MediumItalicA                    0771a
```

```
beor8a    AmerigoBT-RomanA                          0643a
beori8a   AmerigoBT-ItalicA                         0644a
besb8r    Square721BT-Bold                          0247a
besb8rc   Square721BT-BoldCondensed                 0249a
besb8rx   Square721BT-BoldExtended                  0251a
besr8r    Square721BT-Roman                         0246a
besr8rc   Square721BT-RomanCondensed                0248a
besr8rx   Square721BT-RomanExtended                 0250a
bf0r8r    FlemishScriptBT-Regular                   0591a
bffm8r    Transitional551BT-MediumB                 0884a
bffmi8r   Transitional551BT-MediumItalicB           0885a
bfrb8r    Humanist777BT-BoldB                       0859a
bfrbi8r   Humanist777BT-BoldItalicB                 0860a
bfrc8r    Humanist777BT-BlackB                      0861a
bfrci8r   Humanist777BT-BlackItalicB                0862a
bfrl8r    Humanist777BT-LightB                      0855a
bfrli8r   Humanist777BT-LightItalicB                0856a
bfrr8r    Humanist777BT-RomanB                      0857a
bfrri8r   Humanist777BT-ItalicB                     0858a
bftr8r    FrakturBT-Regular                         0983a
bfuc8r    FuturaBlackBT-Regular                     0206a
bg0r8r    GandoBT-Regular                           0625a
bg3b8r    AmericanGaramondBT-Bold                   0045a
bg3bi8r   AmericanGaramondBT-BoldItalic             0046a
bg3r8r    AmericanGaramondBT-Roman                  0043a
bg3ri8r   AmericanGaramondBT-Italic                 0044a
bg5r8r    GoudyCatalogueBT-Regular                  1054a
bg6r8r    GorillaITCbyBT-Regular                    0664a
bgjb8r    ElegantGaramondBT-Bold                    0713a
bgjr8r    ElegantGaramondBT-Roman                   0711a
bgjri8r   ElegantGaramondBT-Italic                  0712a
bgob8r    GoudyOldStyleBT-Bold                      0109a
bgobi8r   GoudyOldStyleBT-BoldItalic                0110a
bgor8r    GoudyOldStyleBT-Roman                     0107a
bgori8r   GoudyOldStyleBT-Italic                    0108a
bgox8r    GoudyOldStyleBT-ExtraBold                 0111a
bgsb8r    Humanist521BT-Bold                        0292a
bgsb8rc   Humanist521BT-BoldCondensed               0496a
bgsbi8r   Humanist521BT-BoldItalic                  0293a
bgsl8r    Humanist521BT-Light                       0288a
bgsli8r   Humanist521BT-LightItalic                 0289a
bgsr8r    Humanist521BT-Roman                       0290a
bgsr8rc   Humanist521BT-RomanCondensed              0495a
bgsri8r   Humanist521BT-Italic                      0291a
bgsu8r    Humanist521BT-UltraBold                   0295a
bgsx8r    Humanist521BT-ExtraBold                   0294a
bgsx8rc   Humanist521BT-XtraBoldCondensed           0497a
bgyh8r    GoudyHeavyfaceBT-Regular                  1049a
```

```
bgyrf8r   GoudyHandtooledBT-Regular              1053a
bgyrrc8r  GoudyHeavyfaceBT-RegularCond           1050a
bh0r8r    HandelGothicBT-Regular                 0768a
bhbr8r    HoboBT-Regular                         0057a
bhir8r    Swiss921BT-RegularA                    0562a
bhrb8r    Swiss721BT-BoldRounded                 0813a
bhrc8r    Swiss721BT-BlackRounded                0815a
bhsr8r    Swiss924BT-RegularB                    0969a
bhva8r    Swiss721BT-Thin                        0100a
bhvai8r   Swiss721BT-ThinItalic                  0101a
bhvb8r    Swiss721BT-Bold                        0005a
bhvb8rc   Swiss721BT-BoldCondensed               0010a
bhvb8rx   Swiss721BT-BoldExtended                0373a
bhvbi8r   Swiss721BT-BoldItalic                  0006a
bhvbi8rc  Swiss721BT-BoldCondensedItalic         0172a
bhvbit8r  Monospace821BT-BoldItalic              0599a
bhvbl8r   Swiss721BT-BoldOutline                 0175a
bhvbl8rc  Swiss721BT-BoldCondensedOutline        0767a
bhvbt8r   Monospace821BT-Bold                    0598a
bhvc8r    Swiss721BT-Black                       0007a
bhvc8rc   Swiss721BT-BlackCondensed              0173a
bhvc8rx   Swiss721BT-BlackExtended               0374a
bhvci8r   Swiss721BT-BlackItalic                 0008a
bhvci8rc  Swiss721BT-BlackCondensedItalic        0174a
bhvcl8r   Swiss721BT-BlackOutline                0563a
bhvh8r    Swiss721BT-Heavy                       0102a
bhvhi8r   Swiss721BT-HeavyItalic                 0103a
bhvl8r    Swiss721BT-Light                       0001a
bhvl8rc   Swiss721BT-LightCondensed              0169a
bhvl8rx   Swiss721BT-LightExtended               0371a
bhvli8r   Swiss721BT-LightItalic                 0002a
bhvli8rc  Swiss721BT-LightCondensedItalic        0170a
bhvm8r    Swiss721BT-Medium                      0759a
bhvmi8r   Swiss721BT-MediumItalic                0760a
bhvr8r    Swiss721BT-Roman                       0003a
bhvr8rc   Swiss721BT-RomanCondensed              0009a
bhvr8rq   Swiss911BT-ExtraCompressed             0105a
bhvr8ru   Swiss911BT-UltraCompressed             0106a
bhvr8rx   Swiss721BT-RomanExtended               0372a
bhvri8r   Swiss721BT-Italic                      0004a
bhvri8rc  Swiss721BT-ItalicCondensed             0171a
bhvrit8r  Monospace821BT-Italic                  0597a
bhvrt8r   Monospace821BT-Roman                   0596a
bhwc8rc   SchadowBT-BlackCondensed               1114a
bhxr8r    HuxleyVerticalBT-Regular               1177a
bi0r8r    CommercialScriptBT-Regular             0976a
bi1r8r    ImpressBT-Regular                      0209a
bi2r8r    ImpulsBT-Regular                       0725a
```

```
biob8r    News701BT-BoldA                          0320a
bior8r    News701BT-RomanA                         0318a
biori8r   News701BT-ItalicA                        0319a
biyb8r    IowanOldStyleBT-Bold                     1200a
biybi8r   IowanOldStyleBT-BoldItalic              1201a
biyc8r    IowanOldStyleBT-Black                    1202a
biyci8r   IowanOldStyleBT-BlackItalic             1203a
biyr8r    IowanOldStyleBT-Roman                    1198a
biyri8r   IowanOldStyleBT-Italic                  1199a
bjfr8r    Freehand575BT-RegularB                   1046a
bkbb8r    Geometric231BT-BoldC                     1128a
bkbh8r    Geometric231BT-HeavyC                    1129a
bkbl8r    Geometric231BT-LightC                    1126a
bkbr8r    Geometric231BT-RomanC                    1127a
bkgl8r    BankGothicBT-Light                       0589a
bkgm8r    BankGothicBT-Medium                      0590a
bkub8r    KaufmannBT-Bold                          0727a
bkur8r    KaufmannBT-Regular                       0726a
bl1r8r    LibertyBT-Regular                        0987a
bl2r8r    LibraBT-Regular                          0690a
bl3r8r    LuciaBT-Regular                          0847a
bl4b8r    LucianBT-Bold                            1143a
bl4r8r    LucianBT-Roman                           1142a
blgb8r    LetterGothic12PitchBT-Bold              0533a
blgbi8r   LetterGothic12PitchBT-BoldItal          0543a
blgr8r    LetterGothic12PitchBT-Roman             0414a
blgri8r   LetterGothic12PitchBT-Italic            0532a
blir8rc   LatinExtraCondensedBT-Regular           0507a
blyb8r    LydianBT-Bold                            0843a
blybi8r   LydianBT-BoldItalic                     0844a
blyr8r    LydianBT-Roman                           0841a
blyri8r   LydianBT-Italic                         0842a
blyrw8r   LydianCursiveBT-Regular                  0845a
bm2c8r    Geometric415BT-BlackA                    0524a
bm2ci8r   Geometric415BT-BlackItalicA             0525a
bm2l8r    Geometric415BT-LiteA                     0520a
bm2li8r   Geometric415BT-LiteItalicA              0521a
bm2m8r    Geometric415BT-MediumA                   0522a
bm2mi8r   Geometric415BT-MediumItalicA            0523a
bm3b8r    MiraraeBT-Bold                           0831a
bm3r8r    MiraraeBT-Roman                          0830a
bm4r8r    MisterEarlBT-Regular                     1221a
bm5b8r    MurrayHillBT-Bold                        0886a
bmar8r    Freehand521BT-RegularC                   1018a
bmlb8r    ZapfElliptical711BT-Bold                 0053a
bmlbi8r   ZapfElliptical711BT-BoldItalic          0054a
bmlr8r    ZapfElliptical711BT-Roman                0051a
bmlri8r   ZapfElliptical711BT-Italic              0052a
```

```
bmor8r    Modern20BT-RomanB                         1168a
bmori8r   Modern20BT-ItalicB                        1169a
bmpb8r    GeometricSlab703BT-Bold                   0310a
bmpb8rc   GeometricSlab703BT-BoldCond               1020a
bmpbi8r   GeometricSlab703BT-BoldItalic             0311a
bmpl8r    GeometricSlab703BT-Light                  0306a
bmpli8r   GeometricSlab703BT-LightItalic            0307a
bmpm8r    GeometricSlab703BT-Medium                 0308a
bmpm8rc   GeometricSlab703BT-MediumCond             1019a
bmpmi8r   GeometricSlab703BT-MediumItalic           0309a
bmpx8r    GeometricSlab703BT-XtraBold               0312a
bmpx8rc   GeometricSlab703BT-XtraBoldCond           1021a
bmpxi8r   GeometricSlab703BT-XtraBoldItal           0313a
bmsr8r    Staccato222BT-Regular                     0610a
bmzr8r    AmazoneBT-Regular                         1040a
bn0r8r    NormandeBT-Roman                          1011a
bn0ri8r   NormandeBT-Italic                         1012a
bnlc8r    Informal011BT-Black                       1116a
bnlr8r    Informal011BT-Roman                       1115a
bnur8r    NuptialBT-Regular                         0981a
bnzb8rc   Geometric706BT-BoldCondensedB             0662a
bnzc8r    Geometric706BT-BlackB                     0661a
bnzc8rc   Geometric706BT-BlackCondensedB            0663a
bnzm8r    Geometric706BT-MediumB                    0660a
bo0r8r    OldDreadfulNo7BT-Regular                  7009a
bo1b8r    OrandaBT-Bold                             1206a
bo1bi8r   OrandaBT-BoldItalic                       1207a
bo1brc8r  OrandaBT-BoldCondensed                    1209a
bo1r8r    OrandaBT-Roman                            1204a
bo1ri8r   OrandaBT-Italic                           1205a
bo1rrc8r  OrandaBT-RomanCondensed                   1208a
bo2r8r    OrbitBbyBT-Regular                        0213a
boar8r    OCRAbyBT-Regular                          0395x
bobr8r    OCRB10PitchBT-Regular                     0646x
boer8r    English157BT-Regular                      0840a
boir8r    FormalScript421BT-Regular                 0609a
bopb8r    ZapfHumanist601BT-Bold                    0017a
bopbi8r   ZapfHumanist601BT-BoldItalic              0018a
bopd8r    ZapfHumanist601BT-Demi                    0134a
bopdi8r   ZapfHumanist601BT-DemiItalic              0135a
bopr8r    ZapfHumanist601BT-Roman                   0015a
bopri8r   ZapfHumanist601BT-Italic                  0016a
bopu8r    ZapfHumanist601BT-Ultra                   0136a
bopui8r   ZapfHumanist601BT-UltraItalic             0137a
borr108r  OratorBT-TenPitch                         0755a
borr158r  OratorBT-FifteenPitch                     0758a
botb8r    Ribbon131BT-Bold                          0208a
botr8r    Ribbon131BT-Regular                       0207a
```

```
boxr8r    OnyxBT-Regular                              0519a
bozr8r    OzHandicraftBT-Roman                        1178a
bp3r8r    Brush445BT-Regular                          0990a
bp4r8r    PioneerITCbyBT-Regular                      0214a
bp5r8r    PiranesiItalicBT-Regular                    0592a
bpar8r    ParkAvenueBT-Regular                        0362a
bpbr8r    PTBarnumBT-Regular                          0720a
bpfr8r    Decorated035BT-Regular                      0605a
bpgb8r    Exotic350BT-Bold                            0628a
bpgd8r    Exotic350BT-DemiBold                        0627a
bpgl8r    Exotic350BT-Light                           0626a
bpi001    NewspaperPiBT-Regular                       9836x
bpi002    SymbolProportionalBT-Regular                9830x
bpi003    UniversalMath1BT-Regular                    9014x
bpi004    CommercialPiBT-Regular                      9025x
bplb8r    ZapfCalligraphic801BT-Bold                  0025a
bplbi8r   ZapfCalligraphic801BT-BoldItal              0026a
bplr8r    ZapfCalligraphic801BT-Roman                 0023a
bplri8r   ZapfCalligraphic801BT-Italic                0024a
bpnb8r    Aldine721BT-Bold                            0114a
bpnbi8r   Aldine721BT-BoldItalic                      0115a
bpnl8r    Aldine721BT-Light                           0804a
bpnli8r   Aldine721BT-LightItalic                     0805a
bpnr8r    Aldine721BT-Roman                           0112a
bpnri8r   Aldine721BT-Italic                          0113a
bppb8r    Lapidary333BT-Bold                          0717a
bppbi8r   Lapidary333BT-BoldItalic                    0718a
bppc8r    Lapidary333BT-Black                         1052a
bppr8r    Lapidary333BT-Roman                         0715a
bppri8r   Lapidary333BT-Italic                        0716a
bpsr8r    ParisianBT-Regular                          1064a
bpyr8r    PlaybillBT-Regular                          0867a
br0b8r    RomanaBT-Bold                               0897a
br0r8r    RomanaBT-Roman                              0896a
brab8r    RaleighBT-Bold                              1081a
brad8r    RaleighBT-DemiBold                          1080a
bral8r    RaleighBT-Light                             1077a
bram8r    RaleighBT-Medium                            1079a
brar8r    RaleighBT-Roman                             1078a
brax8r    RaleighBT-ExtraBold                         1082a
brmb8r    CarminaBT-Bold                              0723a
brmbi8r   CarminaBT-BoldItalic                        0724a
brmc8r    CarminaBT-Black                             0668a
brmci8r   CarminaBT-BlackItalic                       0719a
brml8r    CarminaBT-Light                             0667a
brmli8r   CarminaBT-LightItalic                       0624a
brmm8r    CarminaBT-Medium                            0721a
brmmi8r   CarminaBT-MediumItalic                      0722a
```

```
brsb8r    ArrusBT-Bold                              1147a
brsbi8r   ArrusBT-BoldItalic                        1148a
brsc8r    ArrusBT-Black                             1149a
brsci8r   ArrusBT-BlackItalic                       1150a
brsr8r    ArrusBT-Roman                             1145a
brsri8r   ArrusBT-Italic                            1146a
brvr8r    RevueBT-Regular                           0895a
brwb8r    GeometricSlab712BT-BoldA                  0487a
brwl8r    GeometricSlab712BT-LightA                 0483a
brwli8r   GeometricSlab712BT-LightItalicA           0484a
brwm8r    GeometricSlab712BT-MediumA                0485a
brwmi8r   GeometricSlab712BT-MediumItalA            0486a
brwx8r    GeometricSlab712BT-ExtraBoldA             0488a
bs3b8r    SeagullBT-Bold                            0819a
bs3h8r    SeagullBT-Heavy                                    0820a
bs3l8r    SeagullBT-Light                                    0817a
bs3m8r    SeagullBT-Medium                          0818a
bs4r8r    ShotgunBT-Regular                         0167a
bs4rl8r   ShotgunBlanksBT-Regular                   0234a
bs5b8r    SnellBT-Bold                              0197a
bs5c8r    SnellBT-Black                             0198a
bs5r8r    SnellBT-Regular                           0196a
bs6r8r    StuyvesantBT-Regular                      0980a
bsbb8r    ClassicalGaramondBT-Bold                  0279a
bsbbi8r   ClassicalGaramondBT-BoldItalic            0972a
bsbr8r    ClassicalGaramondBT-Roman                 0277a
bsbri8r   ClassicalGaramondBT-Italic                0278a
bslr8r    StencilBT-Regular                         0191a
bt0r8r    TangoBT-Regular                           1151a
bt1r8r    ThunderbirdBT-Regular                     0606a
bt2r8r    TypoUprightBT-Regular                     0939a
btmb8r    Dutch801BT-Bold                           0013a
btmbi8r   Dutch801BT-BoldItalic                     0014a
btmr8r    Dutch801BT-Roman                          0011a
btmrd8r   Dutch801BT-RomanHeadline                  1035a
btmri8r   Dutch801BT-Italic                         0012a
btms8r    Dutch801BT-SemiBold                       0834a
btmsi8r   Dutch801BT-SemiBoldItalic                 0835a
btmx8r    Dutch801BT-ExtraBold                      0549a
btmxi8r   Dutch801BT-ExtraBoldItalic                0971a
btor8r    Industrial736BT-Roman                     1047a
btori8r   Industrial736BT-Italic                    1048a
btvb8r    Kuenstler480BT-Bold                       0763a
btvbi8r   Kuenstler480BT-BoldItalic                 0764a
btvc8r    Kuenstler480BT-Black                      1026a
btvr8r    Kuenstler480BT-Roman                      0761a
btvri8r   Kuenstler480BT-Italic                     0762a
bumr8r    UmbraBT-Regular                           1074a
```

```
bunb8r    ZurichBT-Bold                            0180a
bunb8rc   ZurichBT-BoldCondensed                   0300a
bunb8rq   ZurichBT-BoldExtraCondensed              0960a
bunb8rx   ZurichBT-BoldExtended                    0261a
bunbi8r   ZurichBT-BoldItalic                      0181a
bunbi8rc  ZurichBT-BoldCondensedItalic             0301a
bunc8r    ZurichBT-Black                           0182a
bunc8rx   ZurichBT-BlackExtended                   0262a
bunci8r   ZurichBT-BlackItalic                     0183a
bunl8r    ZurichBT-Light                           0176a
bunl8rc   ZurichBT-LightCondensed                  0296a
bunl8rq   ZurichBT-LightExtraCondensed             0958a
bunli8r   ZurichBT-LightItalic                     0177a
bunli8rc  ZurichBT-LightCondensedItalic            0297a
bunr8r    ZurichBT-Roman                           0178a
bunr8rc   ZurichBT-RomanCondensed                  0298a
bunr8rq   ZurichBT-ExtraCondensed                  0959a
bunr8rx   ZurichBT-RomanExtended                   0260a
bunri8r   ZurichBT-Italic                          0179a
bunri8rc  ZurichBT-ItalicCondensed                 0299a
bunu8rx   ZurichBT-UltraBlackExtended              0263a
bunx8r    ZurichBT-ExtraBlack                      0970a
burb8r    Venetian301BT-Bold                       1099a
burbi8r   Venetian301BT-BoldItalic                 1100a
burd8r    Venetian301BT-Demi                       1097a
burdi8r   Venetian301BT-DemiItalic                 1098a
burr8r    Venetian301BT-Roman                      1095a
burri8r   Venetian301BT-Italic                     1096a
buyb8r    UniversityRomanBT-Bold                   0317a
buyr8r    UniversityRomanBT-Regular                0316a
bv0r8r    VinetaBT-Regular                         0215a
bvrr8r    VAGRoundedBT-Regular                     0756a
bw0r8r    WeddingTextBT-Regular                    0985a
bwnl8r    WindsorBT-Light                          0909a
bwnl8rc   WindsorBT-LightCondensed                 0326a
bwnr8r    WindsorBT-Roman                          0122a
bwnr8rx   WindsorBT-Elongated                      0327a
bwnrl8r   WindsorBT-Outline                        0988a
zbshals   ShelleyAllegroBT-Regular                 0594a
zbshans   ShelleyAndanteBT-Regular                 0593a
zbshvos   ShelleyVolanteBT-Regular                 0595a
```

A.5 DTC fonts

The 'dtc.map' file has abbreviations for DTC (Digital Typeface Corporation) fonts.

```
dhvc8rc   SansBlackCondensed-DTC
dhvco8rc  SansBlackCondensed-Oblique-DTC
```

```
dhvm8rx   SansExtended-Medium-DTC
dhvr8rx   SansExtended-Regular-DTC
dhvro8rc  SansExtended-RegularOblique-DTC
dhvx8rc   SansExtraBlackCondensed-DTC
dhvl8rx   SansLightExtended-DTC
dhvh8rc   SansThinCondensed-DTC
dhvho8rc  SansThinCondensed-Oblique-DTC
dnbb8r    NewBaskerville-Bold-DTC
dnbbi8r   NewBaskerville-BoldItalic-DTC
dnbri8r   NewBaskerville-RomanItalic-DTC
dnbr8r    NewBaskerville-Roman-DTC
dopr8r    Optimum-Roman-DTC
dopb8r    Optimum-Bold-DTC
dopbo8r   Optimum-BoldItalic-DTC
doro8r    Optimum-RomanItalic-DTC
dpll8r    Palton-Light-DTC
```

A.6 Linotype fonts

The 'linotype.map' file has abbreviations for Linotype fonts.

```
lenb8r    EngraversLH-BoldFace
lpi001    OlympicLH-Pi
ltgb8rx   TradeGothicLH-BoldExtended
ltgr8rx   TradeGothicLH-Extended
lvcc8r    VectoraLH-Black
lvcci8r   VectoraLH-BlackItalic
lvcb8r    VectoraLH-Bold
lvcbi8r   VectoraLH-BoldItalic
lvcri8r   VectoraLH-Italic
lvcl8r    VectoraLH-Light
lvcli8r   VectoraLH-LightItalic
lvcr8r    VectoraLH-Roman
lpi002    WarningLH-Pi
lpi003    AudioLH-Pi
lcfcs8r   ClearfaceGothicLH-Black
lcfbs8r   ClearfaceGothicLH-Bold
lcfls8r   ClearfaceGothicLH-Light
lcfms8r   ClearfaceGothicLH-Medium
lcfrs8r   ClearfaceGothicLH-Roman
lpi004    EECLH-Pi
lffb8r    FairfieldLH-Bold
lffbi8r   FairfieldLH-BoldItalic
lffbc8r   FairfieldLH-BoldSC
lffbd8r   FairfieldLH-CaptionBold
lffhd8r   FairfieldLH-CaptionHeavy
lffld8r   FairfieldLH-CaptionLight
lffmd8r   FairfieldLH-CaptionMedium
```

```
lffh8r   FairfieldLH-Heavy
lffhi8r  FairfieldLH-HeavyItalic
lffhc8r  FairfieldLH-HeavySC
lffl8r   FairfieldLH-Light
lffli8r  FairfieldLH-LightItalic
lfflc8r  FairfieldLH-LightSC
lffm8r   FairfieldLH-Medium
lffmi8r  FairfieldLH-MediumItalic
lffmc8r  FairfieldLH-MediumSC
lffbiw7d FairfieldLH-SwBoldItalicOsF
lffhiw7d FairfieldLH-SwHeavyItalicOsF
lffliw7d FairfieldLH-SwLightItalicOsF
lffmiw7d FairfieldLH-SwMediumItalicOsF
```

A.7 Monotype fonts

The 'monotype.map' file has abbreviations for Monotype fonts.

```
ma1b8r   ArialMT-Bold
ma1b8rn  ArialNarrowMT-Bold MArial-NarrowBold
ma1b9s   ArialSFMT-Bold
ma1bi8r  ArialMT-BoldItalic
ma1bi8rn ArialNarrowMT-BoldItalic MArial-NarrowBoldItalic
ma1bi9s  ArialSFMT-BoldItalic
ma1bot8r ArialMonospacedMT-BoldObliq
ma1br8rc ArialMT-CondensedBold
ma1bt8r  ArialMonospacedMT-Bold
ma1c8r   ArialMT-Black
ma1ci8r  ArialMT-BlackItalic
ma1l8r   ArialMT-Light
ma1l8rc  ArialMT-CondensedLight
ma1li8r  ArialMT-LightItalic
ma1m8r   ArialMT-Medium
ma1mi8r  ArialMT-MediumItalic
ma1r8r   ArialMT
ma1r8rc  ArialMT-Condensed
ma1r8rn  ArialNarrowMT MArial-Narrow
ma1r9s   ArialSFMT
ma1ri8r  ArialMT-Italic
ma1ri9s  ArialSFMT-Italic
ma1rin8r ArialNarrowMT-Italic MArial-NarrowItalic
ma1ro8r  ArialMonospacedMT-Oblique
ma1rt8r  ArialMonospacedMT
ma1x8r   ArialMT-ExtraBold
ma1x8rc  ArialMT-CondensedExtraBold
ma1xi8r  ArialMT-ExtraBoldItalic
ma2b8r   AmasisMT-Bold
ma2bi8r  AmasisMT-BoldItalic
```

```
ma2c8r    AmasisMT-Black
ma2ci8r   AmasisMT-BlackItalic
ma2l8r    AmasisMT-Light
ma2li8r   AmasisMT-LightItalic
ma2m8r    AmasisMT-Medium
ma2mi8r   AmasisMT-MediumItalic
ma2r8r    AmasisMT
ma2ri8r   AmasisMT-Italic
magd8r    MAvantGardeGothicPS-Demi
magdo8r   MAvantGardeGothicPS-DemiObl
magk8r    MAvantGardeGothicPS-Book
magko8r   MAvantGardeGothicPS-BookObl
mahr8r    AshleyScriptMT
maib8r    AbadiMT-Bold MAbadi-Bold
maib8rc   AbadiMT-CondensedBold
maibi8r   AbadiMT-BoldItalic MAbadi-BoldItalic
maij8r    AbadiMT-ExtraLight MAbadi-ExtraLight
maiji8r   AbadiMT-ExtraLightItalic MAbadi-ExtraLightItalic
mail8r    AbadiMT-Light MAbadi-Light
mail8rc   AbadiMT-CondensedLight
maili8r   AbadiMT-LightItalic MAbadi-LightItalic
mair8r    AbadiMT MAbadi
mair8rc   AbadiMT-Condensed
mairi8r   AbadiMT-Italic MAbadi-Italic
maix8r    AbadiMT-ExtraBold MAbadi-ExtraBold
maix8rc   AbadiMT-CondensedExtraBold
maixi8r   AbadiMT-ExtraBoldItalic MAbadi-ExtraBoldItalic
mall8r    MAlbertus-Light AlbertusMT-Light
malr8r    MAlbertus AlbertusMT
malri8r   MAlbertus-Italic AlbertusMT-Italic
mapr8r    ApolloMT MApollo
maprc8r   ApolloMT-SC
mapri7d   ApolloMT-ItalicOsF
mapri8r   ApolloMT-Italic MApollo-Italic
mapri8x   ApolloMT-ItalicExpert
maps7d    ApolloMT-SemiBoldOsF
maps8r    ApolloMT-SemiBold MApollo-SemiBold
maps8x    ApolloMT-SemiBoldExpert
maqb8r    BookAntiqua-Bold
maqbi8r   BookAntiqua-BoldItalic
maqr8r    BookAntiqua
maqri8r   BookAntiqua-Italic
mb1ri8r   BladoMT-Italic MBlado-Italic
mb1ri8x   BladoExpertMT-Italic
mb2r8r    BinnyOldStyleMT
mb2ri8r   BinnyOldStyleMT-Italic
mb3r8r    MBraggadocio
mbbb7a    Bembo-AltBold
```

```
mbbb8r    Bembo-Bold
mbbb8x    BemboExpert-Bold MBemboExpert-Bold
mbbbi7a   Bembo-AltBoldItalic
mbbbi8r   Bembo-BoldItalic
mbbbi8x   BemboExpert-BoldItalic MBemboExpert-BoldItalic
mbbbin8r  BemboMT-SchlbkBoldItalic
mbbbn8r   BemboMT-SchlbkBold
mbbr7a    Bembo-Alt
mbbr8r    Bembo
mbbr8x    BemboExpert MBemboExpert
mbbrd8r   BemboTitlingMT
mbbrdi8r  BemboTitlingMT-Italic
mbbri7a   Bembo-AltItalic
mbbri8r   Bembo-Italic
mbbri8x   BemboExpert-Italic MBemboExpert-Italic
mbbrin8r  BemboMT-SchlbkItalic
mbbrn8r   BemboMT-Schlbk
mbbs7a    Bembo-AltSemiBold
mbbs8r    Bembo-Semibold
mbbs8x    BemboExpert-SemiBold MBemboExpert-SemiBold
mbbsi7a   Bembo-AltSemiBoldItalic
mbbsi8r   Bembo-SemiboldItalic
mbbsi8x   BemboExpert-SemiBoldItalic MBemboExpert-SemiBoldItalic
mbbx7a    Bembo-AltExtraBold
mbbx8r    Bembo-ExtraBold
mbbx8x    BemboExpert-ExtraBold MBemboExpert-ExtraBold
mbbxi8r   Bembo-ExtraBoldItalic
mbbxi8x   BemboExpert-ExtraBoldItalic MBemboExpert-ExtraBoldItalic
mbdb8r    BodoniMT-Bold
mbdb8rc   BodoniMT-CondensedBold MBodoni-BoldCondensed
mbdbi8r   BodoniMT-BoldItalic
mbdbi8rc  BodoniMT-CondensedBoldItalic MBodoni-BoldCondensedItalic
mbdc8r    BodoniMT-Black MBodoni-Black
mbdci8r   BodoniMT-BlackItalic MBodoni-BlackItalic
mbdk8r    BodoniMT-Book MBodoni-Book
mbdki8r   BodoniMT-BookItalic MBodoni-BookItalic
mbdr8r    BodoniMT
mbdri8r   BodoniMT-Italic
mbdu8r    BodoniMT-UltraBold MBodoni-UltraBold
mbdui8r   BodoniMT-UltraBoldItalic MBodoni-UltraBoldItalic
mbeb8r    BellMT-Bold MBell-Bold
mbeb8x    BellExpertMT-Bold
mbebi8r   BellMT-BoldItalic
mbebi8x   BellExpertMT-BoldItalic
mber7a    BellMT-Alt
mber8r    BellMT MBell
mber8x    BellExpertMT
mbera8x   BellExpertMT-Alt
```

```
mberi7a   BellMT-AltItalic
mberi8r   BellMT-Italic MBell-Italic
mberi8x   BellExpertMT-Italic
mbes7a    BellMT-AltSemiBold
mbes8r    BellMT-SemiBold MBell-SemiBold
mbes8x    BellExpertMT-SemiBold
mbesa8x   BellExpertMT-AltSemiBold
mbesi7a   BellMT-AltSemiBoldItalic
mbesi8r   BellMT-SemiBoldItalic
mbesi8x   BellExpertMT-SemiBoldItalic
mbfr8r    BiffoMT
mbkd8r    MBookmanPS-Demi
mbkdi8r   MBookmanPS-DemiItalic
mbkl8r    MBookmanPS-Light
mbkli8r   MBookmanPS-LightItalic
mbmb7a    BulmerMT-BoldAlt
mbmb8r    BulmerMT-Bold
mbmb8x    BulmerMT-BoldExpert
mbmbd7a   BulmerMT-BoldDisplayAlt
mbmbd8r   BulmerMT-BoldDisplay
mbmbdi7a  BulmerMT-BoldItalDisplayAlt
mbmbdi8r  BulmerMT-BoldItalicDisplay
mbmbi7a   BulmerMT-BoldItalicAlt
mbmbi8r   BulmerMT-BoldItalic
mbmbi8x   BulmerMT-BoldItalicExpert
mbmr7a    BulmerMT-RegularAlt
mbmr8r    BulmerMT-Regular
mbmr8x    BulmerMT-RegularExpert
mbmrc8r   BulmerMT-RegularSC
mbmrd7a   BulmerMT-RegularDisplayAlt
mbmrd8r   BulmerMT-RegularDisplay
mbmrdi7a  BulmerMT-ItalicDisplayAlt
mbmrdi8r  BulmerMT-ItalicDisplay
mbmri7a   BulmerMT-ItalicAlt
mbmri8r   BulmerMT-Italic
mbmri8x   BulmerMT-ItalicExpert
mbms7a    BulmerMT-SemiBoldAlt
mbms8r    BulmerMT-SemiBold
mbms8x    BulmerMT-SemiBoldExpert
mbmsi7a   BulmerMT-SemiBoldItalicAlt
mbmsi8r   BulmerMT-SemiBoldItalic
mbmsi8x   BulmerMT-SemiBoldItalExpert
mbmss8r   BulmerMT-SemiBoldSC
mbnr8rc   BernardMT-Condensed
mbtm      Boton-Medium
mbtmi     Boton-MediumItalic
mbtr      Boton-Regular
mbtri     Boton-Italic
```

```
mburw8r   BrushScriptMT
mbvb8r    BaskervilleMT-Bold
mbvb8x    BskvillExpMT-Bold MBaskervilleExpert-Bold
mbvbi8r   BaskervilleMT-BoldItalic
mbvbi8x   BskvillExpMT-BoldItalic MBaskervilleExpert-BoldItalic
mbvr8r    BaskervilleMT
mbvr8x    BskvillExpMT MBaskervilleExpert
mbvri8r   BaskervilleMT-Italic
mbvri8x   BskvillExpMT-Italic MBaskervilleExpert-Italic
mbvs8r    BaskervilleMT-SemiBold
mbvs8x    BskvillExpMT-SemiBold MBaskervilleExpert-SemiBold
mbvsi8r   BaskervilleMT-SemiBoldItalic
mbvsi8x   BskvillExpMT-SemiBoldItalic MBaskervilleExpt-SemiBoldIta
mc1b8r    CalistoMT-Bold
mc1bi8r   CalistoMT-BoldItalic
mc1r8r    CalistoMT
mc1ri8r   CalistoMT-Italic
mc6b8r    ClarionMT-Bold MClarion-Bold
mc6r8r    ClarionMT MClarion
mc6ri8r   ClarionMT-Italic MClarion-Italic
mc7b8r    CompactaMT-Bold
mc8b8r    CalvertMT-Bold
mc8l8r    CalvertMT-Light
mc8m8r    CalvertMT-Medium
mc8r8r    CalvertMT
mcard8r   CaslonTitlingMT
mcdr8r    ClarendonMT MtClarendon
mcfb8r    ClearfaceMT-Bold
mcfbs8r   ClearfaceGothicMT-Bold
mcfds8r   ClearfaceGothicMT-DemiBold
mcnb8r    CenturyMT-Bold MCentury-Bold
mcnbi8r   CenturyMT-BoldItalic MCentury-BoldItalic
mcnr8rx   CenturyMT-Expanded MCentury-Expanded
mcnri8rx  CenturyMT-ExpandedItalic MCentury-ExpandedItalic
mcr8r12   CourierTwelveMT
mcrb8r    CourierPS-Bold MCourierPS-Bold
mcrbi8r   CourierPS-BoldItalic MCourierPS-BoldItalic
mcrr8r    CourierPS MCourierPS
mcrri8r   CourierPS-Italic MCourierPS-Italic
mcsb8r    CenturySchbookMT-Bold MCenturySchoolbook-Bold
mcsbi8r   CenturySchbookMT-BoldItalic MCenturySchoolbook-BoldItalic
mcsr8r    CenturySchbookMT MCenturySchoolbook
mcsri8r   MCenturySchoolbook-Italic
mcub8r    CenturyOSMT-Bold MCenturyOldStyle-Bold
mcubi8r   CenturyOSMT-BoldItalic MCenturyOldStyle-BoldItalic
mcur8r    CenturyOSMT MCenturyOldStyle
mcuri8r   CenturyOSMT-Italic MCenturyOldStyle-Italic
mdmb8r    DelimaMT-Bold
```

```
mdmbi8r   DelimaMT-BoldItalic
mdml8r    DelimaMT-Light
mdmli8r   DelimaMT-LightItalic
mdmr8r    DelimaMT
mdmri8r   DelimaMT-Italic
mdms8r    DelimaMT-SemiBold
mdmsi8r   DelimaMT-SemiBoldItalic
mdmx8r    DelimaMT-ExtraBold
mdmxi8r   DelimaMT-ExtraBoldItalic
mdsr8r    DorchesterScriptMT
mdtb7a    DanteMT-AltBold
mdtb8r    DanteMT-Bold
mdtb8x    DanteExpertMT-Bold
mdtbi7a   DanteMT-AltBoldItalic
mdtbi8r   DanteMT-BoldItalic
mdtbi8x   DanteExpertMT-BoldItalic
mdtm7a    DanteMT-AltMedium
mdtm8r    DanteMT-Medium
mdtm8x    DanteExpertMT-Medium
mdtmi7a   DanteMT-AltMediumItalic
mdtmi8r   DanteMT-MediumItalic
mdtmi8x   DanteExpertMT-MediumItalic
mdtr7a    DanteMT-Alt
mdtr8r    DanteMT
mdtr8x    DanteExpertMT
mdtrd8r   DanteTitlingMT
mdtri7a   DanteMT-AltItalic
mdtri8r   DanteMT-Italic
mdtri8x   DanteExpertMT-Italic
mebm8r    BaskervilleBE-Medium
mebmi8r   BaskervilleBE-MediumItalic
mebr8r    BaskervilleBE-Regular
mebri8r   BaskervilleBE-Italic
meer8r    EgyptianMT-Extended MEgyptianExtended
melb8r    EllingtonMT-Bold MEllington-Bold
melbi8r   EllingtonMT-BoldItalic MEllington-BoldItalic
mell8r    EllingtonMT-Light MEllington-Light
melli8r   EllingtonMT-LightItalic MEllington-LightItalic
melr8r    EllingtonMT MEllington
melri8r   EllingtonMT-Italic MEllington-Italic
melx8r    EllingtonMT-ExtraBold MEllington-ExtraBold
melxi8r   EllingtonMT-ExtraBoldItalic MEllington-ExtraBoldItalic
menb8r    EngraversMT-Bold
menr8r    EngraversMT
menrf8r   EngraversOldEnglishMT
metr8r    EhrhardtMT
metr8x    EhrhardtExpMT MEhrhardtExpt
metri8r   EhrhardtMT-Italic
```

```
metri8x   EhrhardtExpMT-Italic MEhrhardtExpt-Italic
mets8r    EhrhardtMT-SemiBold
mets8x    EhrhardtExpMT-SemiBold MEhrhardtExpt-SemiBold
metsi8r   EhrhardtMT-SemiBoldItalic
metsi8x   EhrhardtExpMT-SemiBoldItal MEhrhardtExpt-SemiBoldItalic
mf1r7a    FournierMT-Alt
mf1r8r    FournierMT
mf1r8x    FournierExpertMT
mf1rd8r   FournierMT-TallCaps
mf1rdi8r  FournierMT-TallCapsItalic
mf1ri7a   FournierMT-AltItalic
mf1ri8r   FournierMT-Italic
mf1ri8x   FournierExpertMT-Italic
mf1rp8r   FournierOrnamentsMT
mf2r8rc   FacadeMT-Condensed
mf3rd8r   FestivalTitlingMT
mf4b8r    FootlightMT-Bold
mf4bi8r   FootlightMT-BoldItalic
mf4l8r    FootlightMT-Light
mf4li8r   FootlightMT-LightItalic
mf4r8r    FootlightMT
mf4ri8r   FootlightMT-Italic
mf4x8r    FootlightMT-ExtraBold
mf4xi8r   FootlightMT-ExtraBoldItalic
mfer8r    ForteMT MForte
mfgr8rq   FrankGothMT-ExtraCondensed
mfir8r    FigaroMT MFigaro
mfsr8r    FalstaffMT MFalstaff
mfsrd8r   FalstaffFestivalMT
mfxr8r    FelixTitlingMT
mg2rw     Giddyup
mg4r8r    MGoudyModern
mg4ri8r   MGoudyModern-Italic
mg5r8r    GoudyCatalogueMT MGoudyCatalogue
mg5ri8r   GoudyCatalogueMT-Italic MGoudyCatalogue-Italic
mgmb8r    GaramondMT-Bold
mgmb8x    GaramondExpertMT-Bold MGaramondExpert-Bold
mgmbi8r   GaramondMT-BoldItalic
mgmbi8x   GaramondExpertMT-BoldItalic MGaramondExpert-BoldItalic
mgmr8r    GaramondMT
mgmr8x    GaramondExpertMT MGaramondExpert
mgmrd8r   GaramondMT-SwashCaps
mgmri7a   GaramondMT-AlternativeItalic
mgmri8r   GaramondMT-Italic
mgmri8x   GaramondExpertMT-Italic MGaramondExpert-Italic
mgmrw8r   GaramondMT-Swash
mgor8r    GoudyOldStyleMT MGoudyOldStyle
mgori8r   GoudyOldStyleMT-Italic MGoudyOldStyle-Italic
```

```
mgqb8r    GrotesqueMT-Bold MGrotesque-Bold
mgqb8rx   GrotesqueMT-BoldExtended
mgqbd8rc  GrotesqueDisplayMT-BoldCond
mgqbd8rx  GrotesqueDisplayMT-BoldExt
mgqc8r    GrotesqueMT-Black MGrotesque-Black
mgql8r    GrotesqueMT-Light MGrotesque-Light
mgql8rc   GrotesqueMT-LightCondensed MGrotesque-LightCondensed
mgqli8r   GrotesqueMT-LightItalic MGrotesque-LightItalic
mgqr8r    GrotesqueMT MGrotesque
mgqr8rc   GrotesqueMT-Condensed MGrotesque-Condensed
mgqr8rq   GrotesqueMT-ExtraCondensed MGrotesque-ExtraCondensed
mgqri8r   GrotesqueMT-Italic MGrotesque-Italic
mgrb8r    GloucesMT-Bold MGloucester-Bold
mgrb8rc   GloucesMT-CondensedBold MGloucester-BoldCondensed
mgrb8ro   GloucesMT-ExtraCondensedBold MGloucester-BoldExtraCondensed
mgrb8rx   GloucesMT-ExtendedBold MGloucester-BoldExtended
mgrr8r    MGloucester-OldStyle
mgs8rc    GillSans-Condensed
mgsb7a    GillAltOneMT-Bold
mgsb8r    GillSans-Bold
mgsb8rc   GillSans-BoldCondensed
mgsb8rq   GillSansMT-ExCondensedBold
mgsbd8r   GillSansDisplayMT-Bold
mgsbd8rc  GillSansDisplayMT-CondBold
mgsbi7a   GillAltOneMT-BoldItalic
mgsbi8r   GillSans-BoldItalic
mgsbin8r  GillSansMT-SchlbkBoldItalic
mgsbn8r   GillSansMT-SchlbkBold
mgsh7a    GillAltOneMT-Heavy
mgsh8r    GillSans-Heavy
mgshi7a   GillAltOneMT-HeavyItalic
mgshi8r   GillSans-HeavyItalic
mgsk7a    GillAltOneMT-Book
mgsk8r    GillSans-Book
mgski7a   GillAltOneMT-BookItalic
mgski8r   GillSans-BookItalic
mgsl7a    GillAltOneMT-Light
mgsl8r    GillSans-Light
mgsli7a   GillAltOneMT-LightItalic
mgsli8r   GillSans-LightItalic
mgsr7a    GillAltOneMT
mgsr8r    GillSans
mgsr8rc   GillSans-Condensed
mgsrh8r   GillSansMT-Shadow
mgsri7a   GillAltOneMT-Italic
mgsri8r   GillSans-Italic
mgsrin8r  GillSansMT-SchlbkItalic
mgsrl8r   GillSansShadowedMT-Light
```

```
mgsrn8r   GillSansMT-Schlbk
mgsu8r    GillSans-UltraBold
mgsu8rc   GillSans-UltraBoldCondensed
mgsx8r    GillSans-ExtraBold
mgsxd8r   GillSansDisplayMT-ExtraBold
mgtr7a    GoudyTextMT-Alternate
mgtr7c    GoudyTextMT-Dfr
mgtr8r    MGoudyText GoudyTextMT
mgtrd8r   GoudyTextMT-LombardicCapitals
mgyb8r    GoudyMT-Bold MGoudyBold
mgybi8r   GoudyMT-BoldItalic
mgyrp8r   GoudySorts
mgyx8r    GoudyMT-ExtraBold MGoudyExtraBold
mhdr8r    HeadlineMT-Bold MHeadlineBold
mhob8r    HorleyOSMT-Bold MHorleyOldStyle-Bold
mhobi8r   HorleyOSMT-BoldItalic MHorleyOldStyle-BoldItalic
mhol8r    HorleyOSMT-Light MHorleyOldStyle-Light
mholi8r   HorleyOSMT-LightItalic MHorleyOldStyle-LightItalic
mhor8r    HorleyOSMT MHorleyOldStyle
mhori8r   HorleyOSMT-Italic MHorleyOldStyle-Italic
mhos8r    HorleyOSMT-SemiBold MHorleyOldStyle-SemiBold
mhosi8r   HorleyOSMT-SemiBoldItalic MHorleyOldStyle-SemiBolItalic
mhrb8r    ArialRoundedMT-Bold
mhrl8r    ArialRoundedMT-Light
mhrr8r    ArialRoundedMT
mhrx8r    ArialRoundedMT-ExtraBold
mi0r8r    CommercialScriptMT
micr8r    ImpactMT
mifb8r    InflexMT-Bold MInflex-Bold
miib8r    ImprintMT-Bold MImprint-Bold
miib8x    ImprintExpertMT-Bold
miibi8r   ImprintMT-BoldItalic MImprint-BoldItalic
miibi8x   ImprintExpertMT-BoldItalic
miir8r    ImprintMT MImprint
miir8x    ImprintExpertMT
miirh8r   ImprintMT-Shadow
miirhi8r  ImprintMT-ShadowItalic
miiri8r   ImprintMT-Italic MImprint-Italic
miiri8x   ImprintExpertMT-Italic
miirp     ImprintExtras
miob8r    IonicMT-Bold MIonic-Bold
mior8r    IonicMT MIonic
miori8r   IonicMT-Italic MIonic-Italic
misb8r    ItalianOldStyleMT-Bold MItalianOldStyle-Bold
misbi8r   ItalianOldStyleMT-BoldItalic MItalianOldStyle-BoldItalic
misr8r    ItalianOldStyleMT MItalianOldStyle
misri8r   ItalianOldStyleMT-Italic MItalianOldStyle-Italic
mjnb8r    JansonMT-Bold MJanson-Bold
```

```
mjnb8x   JansonExpertMT-Bold
mjnbi8r  JansonMT-BoldItalic MJanson-BoldItalic
mjnbi8x  JansonExpertMT-BoldItalic
mjnr8r   JansonMT MJanson
mjnr8x   JansonExpertMT
mjnri8r  JansonMT-Italic MJanson-Italic
mjnri8x  JansonExpertMT-Italic
mjob7d   JoannaMT-BoldOSF
mjob8r   JoannaMT-Bold
mjob8x   JoannaMT-BoldExpert
mjobi7d  JoannaMT-BoldItalicOSF
mjobi8r  JoannaMT-BoldItalic
mjobi8x  JoannaMT-BoldItalicExpert
mjor8r   JoannaMT
mjor8x   JoannaMT-Expert
mjorc7d  JoannaMT-SCOSF
mjori7d  JoannaMT-ItalicOSF
mjori8r  JoannaMT-Italic
mjori8x  JoannaMT-ItalicExpert
mjos8r   JoannaMT-SemiBold
mjos8x   JoannaMT-SemiBoldExpert
mjosi7d  JoannaMT-SemiBoldItalicOSF
mjosi8r  JoannaMT-SemiBoldItalic
mjosi8x  JoannaMT-SemiBoldItaExpert
mjoss7d  JoannaMT-SemiBoldSCOSF
mjox7d   JoannaMT-ExtraBoldOSF
mjox8r   JoannaMT-ExtraBold
mjox8x   JoannaMT-ExtraBoldExpert
mklr8r   KlangMT MKlang
mkn8r    KinoMT
mkob8r   BookmanOldStyle-Bold
mkobi8r  BookmanOldStyle-BoldItalic
mkor8r   BookmanOldStyle
mkori8r  BookmanOldStyle-Italic
mlgb8r   LetterGothicMT-Bold
mlgbo8r  LetterGothicMT-BoldOblique
mlgr8r   LetterGothicMT
mlgro8r  LetterGothicMT-Oblique
mlir8rc  LatinMT-Condensed
mlyr8r   LydianMT
mlyrw8r  LydianCursiveMT
mm1r8r   MonolineScriptMT
mm7r8r   MaturaMT
mm7rw8r  MaturaMT-ScriptCapitals
mm8bl8r  MonotypeOldStyleMT-BoldOut
mmeb8r   MercuriusMT-BoldScript MercuriusScriptMT-Bold
mmob8r   ModernMT-Bold MModern-Bold
mmobi8r  ModernMT-BoldItalic MModern-BoldItalic
```

```
mmor8r    ModernMT-Extended MModernExtended
mmor8rc   ModernMT-Condensed
mmor8rw   ModernMT-Wide
mmori8r   ModernMT-CondensedItalic MModernExtended-Italic
mmori8rw  ModernMT-WideItalic
mmori8rx  ModernMT-ExtendedItalic
mn1p8r    BinnerPosterMT
mn1r8r    BinnerGothicMT
mncb8r    MCenturySchoolbookPS-Bold
mncbi8r   CentSchlbookPS-BoldItalic MCenturySchoolbookPS-BoldIta
mncr8r    CentSchlbookPS MCenturySchoolbookPS
mncri8r   CentSchlbookPS-Italic MCenturySchoolbookPS-Ita
mngb8r    NewsGothicMT-Bold
mngb8rc   NewsGothicMT-CondensedBold
mngr8r    NewsGothicMT
mngr8rc   NewsGothicMT-Condensed
mngri8r   NewsGothicMT-Italic
mnib8r    NimrodMT-Bold
mnibi8r   NimrodMT-BoldItalic
mnir8r    NimrodMT
mniri8r   NimrodMT-Italic
mnkr8r    NeographikMT
mnnb8r    NewClarendonMT-Bold MNewClarendon-Bold
mnnr8r    NewClarendonMT MNewClarendon
mnpb8r    NewsPlantinMT-Bold
mnpbi8r   NewsPlantinMT-BoldItalic
mnpr8r    NewsPlantinMT
mnpri8r   NewsPlantinMT-Italic
mnrr8r    NewBerolinaMT
mnsb8r    TimesNewRomanPS-Bold
mnsb8x    TimesNRPSExpert-Bold
mnsbi8r   TimesNewRomanPS-BoldItalic
mnsbi8x   TimesNRPSExpert-BoldItalic
mnsr8r    TimesNewRomanPS
mnsr8x    TimesNRPSExpert
mnsri8r   TimesNewRomanPS-Italic
mnsri8x   TimesNRPSExpert-Italic
mntb78r   TimesNRSevenMT-Bold
mntb8r    TimesNRMT-Bold
mntb8rc   TimesNewRomanMT-BoldCond TimesNRMT-CondensedBold
mntb8x    TimesNRExpertMT-Bold MTimesNewRomanExpert-Bold
mntb9s    TimesNewRomanSF-Bold
mntbi78r  TimesNRSevenMT-BoldItalic
mntbi8r   TimesNRMT-BoldItalic
mntbi8x   TimesNRExpertMT-BoldItalic MTimesNewRomanExpt-BoldItalic
mntbi9s   TimesNewRomanSF-BoldItalic
mntbk8r   MTimesNewRomanGreek-Bold
mntbko8r  MTimesNewRomanGreek-BoldInc
```

```
mntboz8r  MTimesNewRomanCyrillic-BolInc
mntbz8r   MTimesNewRomanCyrillic-Bold
mntm8r    TimesNRMT-Medium MTimesNewRoman-Medium
mntmi8r   TimesNRMT-MediumItalic MTimesNewRoman-MediumItalic
mntr78r   TimesNRSevenMT
mntr8r    TimesNRMT
mntr8rc   TimesNewRomanMT-Cond TimesNRMT-Condensed
mntr8x    TimesNRExpertMT MTimesNewRomanExpert
mntr9s    TimesNewRomanSF
mntri78r  TimesNRSevenMT-Italic
mntri8r   TimesNRMT-Italic
mntri8rc  TimesNewRomanMT-CondItalic TimesNRMT-CondensedItalic
mntri8x   TimesNRExpertMT-Italic MTimesNewRomanExpert-Italic
mntri9s   TimesNewRomanSF-Italic
mntrk8r   MTimesNewRomanGreek
mntrko    MTimesNewRomanGreek-Inclined
mntroz8r  MTimesNewRomanCyrillic-Inc
mntrz8r   MTimesNewRomanCyrillic
mnts8r    TimesNRMT-SemiBold
mntsi8r   TimesNRMT-SemiBoldItalic
mntx8r    TimesNRMT-ExtraBold
mo3r8r    ColonnaMT
mo4b8r    OceanSansMT-Bold
mo4bi8r   OceanSansMT-BoldItalic
mo4ji8r   OceanSansMT-BookItalic
mo4k8r    OceanSansMT-Book
mo4l8r    OceanSansMT-Light
mo4li8r   OceanSansMT-LightItalic
mo4s8r    OceanSansMT-SemiBold
mo4se8r   OceanSansMT-SemiBoldItalic
mo4x8r    OceanSansMT-ExtraBold
mo4xi8r   OceanSansMT-ExtraBoldItalic
moer8r    OldEnglishTextMT MOldEnglishText
molb7a    ColmcilleAltMT-Bold
molb8r    ColmcilleMT-Bold
molbi7a   ColmcilleAltMT-BoldItalic
molbi8r   ColmcilleMT-BoldItalic
molr7a    ColmcilleAltMT
molr8r    ColmcilleMT
molri7a   ColmcilleAltMT-Italic
molri8r   ColmcilleMT-Italic
molrp8r   ColmcilleOrnamentsMT
mosb8r    OldStyleMT-Bold MOldStyle-Bold
mosbi8r   OldStyleMT-BoldItalic MOldStyle-BoldItalic
mosbl8r   MOldStyle-BoldOutline
mosr8r    OldStyleMT MOldStyle
mosri8r   OldStyleMT-Italic MOldStyle-Italic
motb8r    CoronetMT-Bold
```

```
movr8r    OctavianMT
movr8x    OctavianMT-Expert
movrc8r   OctavianMT-SC
movri7d   OctavianMT-ItalicOsF
movri8r   OctavianMT-Italic
movri8x   OctavianMT-ItalicExpert
moxr8r    MOnyx OnyxMT
mp1r8r    PalaceScriptMT
mp1rs8r   PalaceScriptMT-SemiBold
mp2r8r    PepitaMT
mp6b8r    BlueprintMT-Bold
mp6bi8r   BlueprintMT-BoldItalic
mp6r8r    BlueprintMT
mp6ri8r   BlueprintMT-Italic
mpdb8rc   PlacardMT-CondensedBold
mpdr8rc   PlacardMT-Condensed
mphb8r    PhotinaMT-Bold
mphbi8r   PhotinaMT-BoldItalic
mphr8r    PhotinaMT
mphri8r   PhotinaMT-Italic
mphs8r    PhotinaMT-SemiBold MPhotina-SemiBold
mphsi8r   PhotinaMT-SemiBoldItalic MPhotina-SemiBoldItalic
mphu8r    PhotinaMT-UltraBold MPhotina-UltraBold
mphui8r   PhotinaMT-UltraBoldItalic MPhotina-UltraBoldItalic
mpi001    RococoOrnamentsOne
mpi002    RococoOrnamentsTwo
mpi003    ArabesqueOrnamentsOne
mpi101    AlmanacMT Almanac
mpi102    BotanicalMT Botanical
mpi103    DirectionsMT Directions
mpi104    SportsOne SportsOneMT
mpi105    SportsTwo SportsTwoMT
mpi106    TransportMT Transport
mpi107    VacationMT Vacation
mpi108    SportsThree SportsThreeMT
mpi109    SportsFour SportsFourMT
mpi201    CircleFrameMT CircleFrame
mpi202    CircleFrameNegMT CircleFrameNeg
mpi203    SquareFrameMT SquareFrame
mpi204    SquareFrameNegMT SquareFrameNeg
mpi205    DiamondBodoni DiamondBodoni
mpi206    DiamondPositive DiamondPositive
mpi207    DiamondNegative DiamondNegative
mpi208    OvalFrameMT circled numerals
mpi209    OvalFrameNegativeMT ditto
mpi300    Giddyup-Thangs
mpi301    Petrucchio
mpi302    AquaLifeMT fish
```

```
mpi303   BonApetit food
mpi304   DinosaursMT dinosaurs
mpi305   FrontierMT cowboys & indians
mpi306   Holidays clip art
mpi307   KeystrokesExtrasMT keyboards
mpi308   KeystrokesMT ditto
mpi309   Melodies musical instruments
mpi310   MilestonesOneMT greeting card illos
mpi311   MilestonesTwoMT ditto
mpi312   MonkeyBusiness animals
mpi313   MonotypeSorts dingbats
mpi314   NatureMT animals
mpi315   Parties clip art
mpi319   PlaytimeMT toys
mpi320   SignsMT signs
mpi321   SouthwestOrnamentsMT geometrics
mpi322   KeystrokesShadowExtrasMT
mpi323   KeystrokesShadowMT
mpnb8r   Plantin-Bold
mpnb8rc  Plantin-BoldCondensed
mpnb8x   PlantinExp-Bold PlantinExpert-Bold
mpnbd8rc PlantinHeadlineMT-BoldCond
mpnbi8r  Plantin-BoldItalic
mpnbi8x  PlantinExp-BoldItalic PlantinExpert-BoldItalic
mpnbin8r PlantinMT-SchlbkBoldItalic
mpnbn8r  PlantinMT-SchlbkBold
mpnl8r   Plantin-Light
mpnl8x   PlantinExp-Light MPlantinExpt-Light
mpnld8rc PlantinHeadlineMT-LightCond
mpnli8r  Plantin-LightItalic
mpnli8x  PlantinExp-LightItalic MPlantinExpt-LightItalic
mpnmd8rc PlantinHeadlineMT-MedCond
mpnr8r   Plantin
mpnr8x   PlantinExp PlantinExpert
mpnra8x  PlantinExp-AltFigures
mpnri8r  Plantin-Italic
mpnri8x  PlantinExp-Italic PlantinExpert-Italic
mpnrin8r PlantinMT-SchlbkItalic
mpnrn8r  PlantinMT-Schlbk
mpns8r   Plantin-Semibold
mpns8x   PlantinExp-SemiBold MPlantinExpt-SemiBold
mpnsi8r  Plantin-SemiboldItalic Plantin-SemiboldItalic
mpnsi8x  PlantinExp-SemiBoldItalic MPlantinExpt-SemiBoldItalic
mppb8r   Perpetua-Bold
mppb8x   PerpetuaExpert-Bold MPerpetuaExpert-Bold
mppbd8r  PerpetuaTitlingMT-Bold
mppbi8r  Perpetua-BoldItalic
mppbi8x  PerpetuaExpert-BoldItalic MPerpetuaExpert-BoldItalic
```

```
mppld8r   PerpetuaTitlingMT-Light
mppr8r    Perpetua
mppr8x    PerpetuaExpert MPerpetuaExpert
mpprd8r   PerpetuaTitlingMT
mppri8r   Perpetua-Italic
mppri8x   PerpetuaExpert-Italic MPerpetuaExpert-Italic
mpum      PopplLaudatio-Medium
mpumi     PopplLaudatio-MediumItalic
mpur      PopplLaudatio-Regular
mpuri     PopplLaudatio-Italic
mpwb8r    PerrywoodMT-Bold
mpwbi8r   PerrywoodMT-BoldItalic
mpwl8r    PerrywoodMT-Light
mpwli8r   PerrywoodMT-LightItalic
mpwr8r    PerrywoodMT
mpwri8r   PerrywoodMT-Italic
mpws8r    PerrywoodMT-SemiBold
mpwsi8r   PerrywoodMT-SemiBoldItalic
mpwx8r    PerrywoodMT-ExtraBold
mpwxi8r   PerrywoodMT-ExtraBoldItalic
mpzr8r    PoliphilusMT MPoliphilus
mpzr8x    PoliphilusExpertMT
mqtr      Boulevard
mr2b8r    CantoriaMT-Bold
mr2bi8r   CantoriaMT-BoldItalic
mr2l8r    CantoriaMT-Light
mr2li8r   CantoriaMT-LightItalic
mr2r8r    CantoriaMT
mr2ri8r   CantoriaMT-Italic
mr2s8r    CantoriaMT-SemiBold
mr2si8r   CantoriaMT-SemiBoldItalic
mr2x8r    CantoriaMT-ExtraBold
mr2xi8r   CantoriaMT-ExtraBoldItalic
mr5rw8r   FrenchScriptMT
mrur8rc   RunicMT-Condensed
mrwb8r    Rockwell-Bold
mrwb8rc   Rockwell-BoldCondensed
mrwbi8r   Rockwell-BoldItalic
mrwl8r    Rockwell-Light
mrwli8r   Rockwell-LightItalic
mrwr8r    Rockwell
mrwr8rc   Rockwell-Condensed
mrwri8r   Rockwell-Italic
mrwx8r    Rockwell-ExtraBold
ms1r8r    ScotchRomanMT MScotchRoman
ms1ri8r   ScotchRomanMT-Italic MScotchRoman-Italic
ms2b8r    ScriptMT-Bold
ms7bai    SassoonInfant-BoldAlt
```

```
ms7bais  SassoonSanSlope-BoldAlt
ms7bap   SassoonPrimary-BoldAlt
ms7bas   SassoonSans-BoldAlt
ms7bi    SassoonInfant-Bold
ms7bis   SassoonSanSlope-Bold
ms7bp    SassoonPrimary-Bold
ms7bs    SassoonSans-Bold
ms7mais  SassoonSanSlope-MediumAlt
ms7mas   SassoonSans-MediumAlt
ms7mis   SassoonSanSlope-Medium
ms7ms    SassoonSans-Medium
ms7rai   SassoonInfant-Alt
ms7rais  SassoonSanSlope-Alt
ms7rap   SassoonPrimary-Alt
ms7ras   SassoonSans-Alt
ms7ri    SassoonInfant
ms7ris   SassoonSanSlope
ms7rp    SassoonPrimary
ms7rs    SassoonSans
msbr8r   SabonMT MSabon
msbrc7d  SabonMT-SCOSF
msbri7d  SabonMT-ItalicOSF
msbri8r  SabonMT-Italic MSabon-Italic
msbs7c   SabonMT-SemiBoldOSF
msbs8r   SabonMT-SemiBold MSabon-SemiBold
msmr8r   SpectrumMT MSpectrum
msmr8x   SpectrumMT-Expert
msmrc8r  SpectrumMT-SC
msmri7d  SpectrumMT-ItalicOsF
msmri8r  SpectrumMT-Italic MSpectrum-Italic
msmri8x  SpectrumMT-ItalicExpert
msms7d   SpectrumMT-SemiBoldOsF
msms8r   SpectrumMT-SemiBold MSpectrum-SemiBold
msms8x   SpectrumMT-SemiBoldExpert
msn8r1   MSpartan-SizeOne
msn8r2   MSpartan-SizeTwo
msn8r3   MSpartan-SizeThree
msn8r4   MSpartan-SizeFour    SpartanFourMT
msnb8r1  MSpartan-BoldSizeOne
msnb8r12 SpartanOneTwoMT-Bold
msnb8r13 SpartanOneThreeMT-Bold
msnb8r2  MSpartan-BoldSizeTwo
msnb8r24 SpartanTwoFourMT-Bold
msnb8r3  MSpartan-BoldSizeThree
msnb8r34 SpartanThreeFourMT-Bold
msnb8r4  SpartanFourMT-Bold MSpartan-BoldSizeFour
msni8r12 SpartanOneTwoMT-Italic
msni8r13 SpartanOneThreeMT-Italic
```

```
msni8r24 SpartanTwoFourMT-Italic
msni8r34 SpartanThreeFourMT-Italic
msnr8r12 SpartanOneTwoMT
msnr8r13 SpartanOneThreeMT
msnr8r24 SpartanTwoFourMT
msnr8r34 SpartanThreeFourMT
msnri8r1 MSpartan-ItalicSizeOne
msnri8r2 MSpartan-ItalicSizeTwo
msnri8r3 MSpartan-ItalicSizeThree
msnri8r4 SpartanFourMT-Italic MSpartan-ItalicSizeFour
mswb8r   SwingMT-Bold
msyr     MSymbolPS SymbolPS
mtlr8r   MCastellar CastellarMT
mtmbg8r  TimesSmallTextMT-Bold MTimesSmallText-Bold
mtmrg8r  TimesSmallTextMT MTimesSmallText
mtmrgi8r TimesSmallTextMT-Italic MTimesSmallText-Italic
mtwb8r   TwCenMT-Bold MTwentiethCentury-Bold
mtwb8rc  TwCenMT-CondensedBold MTwentiethCentury-BoldCondensed
mtwbi8r  TwCenMT-BoldItalic MTwentiethCentury-BoldItalic
mtwl8r   TwCenMT-Light MTwentiethCentury-Light
mtwli8r  TwCenMT-LightItalic MTwentiethCentury-LightItalic
mtwm8r   TwCenMT-Medium MTwentiethCentury-Medium
mtwm8rc  TwCenMT-CondensedMedium MTwentiethCentury-MediumCondensed
mtwmi8r  TwCenMT-MediumItalic MTwentiethCentury-MediumItalic
mtws8r   TwCenMT-SemiBold MTwentiethCentury-SemiBold
mtwsm8r  TwCenMT-SemiMedium MTwentiethCentury-SemiMedium
mtwu8r   TwCenMT-UltraBold MTwentiethCentury-UltraBold
mtwu8rc  TwCenMT-CondensedUltraBold MTwentiethCentury-UltraBoldCondensed
mtwui8r  TwCenMT-UltraBoldItalic MTwentiethCentury-UltraBoldItalic
mtwx8r   TwCenMT-ExtraBold MTwentiethCentury-ExtraBold
mtwx8rc  TwCenMT-CondensedExtraBold MTwentiethCentury-ExtraBoldCondensed
mtwxi8r  TwCenMT-ExtraBoldItalic MTwentiethCentury-ExtraBoldItalic
mtyr8r   TypewriterMT
mtyre8r  TypewriterEliteMT
mtyrs8r  TypewriterGothicMT
mu0b8r   ColumbusMT-Bold
mu0b8x   ColumbusExpMT-Bold
mu0bi8r  ColumbusMT-BoldItalic
mu0bi8x  ColumbusExpMT-BoldItalic
mu0r8r   ColumbusMT
mu0r8x   ColumbusExpMT
mu0ri8r  ColumbusMT-Italic
mu0ri8x  ColumbusExpMT-Italic
mu0rp8r1 ColumbusOrnamentsOneMT
mu0rp8r2 ColumbusOrnamentsTwoMT
mu0s8r   ColumbusMT-SemiBold
mu0s8x   ColumbusExpMT-SemiBold
mu0si8r  ColumbusMT-SemiBoldItalic
```

```
mu0si8x  ColumbusExpMT-SemiBoldItal
murb7a   CentaurMT-AltBold
murb8r   CentaurMT-Bold
murb8x   CentaurExpertMT-Bold
murbi7a  CentaurMT-AltBoldItalic
murbi8r  CentaurMT-BoldItalic
murbi8x  CentaurExpertMT-BoldItalic
murr7a   CentaurMT-Alt
murr8r   CentaurMT
murr8x   CentaurExpertMT
murrai   CentaurMT-ItalicA
murri7a  CentaurMT-AltItalic
murri8r  CentaurMT-Italic
murri8x  CentaurExpertMT-Italic
murrw8r  CentaurSwashMT
mvdr8r   VanDijckMT MVanDijck
mvdr8x   VanDijckExpertMT
mvdra8x  VanDijckExpertMT-AltFigs
mvdrai8x VanDijckExpertMT-AltFigsIta
mvdri8r  VanDijckMT-Italic
mvdri8x  VanDijckExpertMT-Italic
mvird8rc VictoriaTitlingMT-Condensed
mwbm8r   WalbaumMT-Medium MWalbaum-Medium
mwbm8x   WalbaumExpMT-Medium
mwbmi8r  WalbaumMT-MediumItalic MWalbaum-MediumItalic
mwbmi8x  WalbaumExpMT-MediumItalic
mwbr8r   WalbaumMT MWalbaum
mwbr8x   WalbaumExpMT
mwbri8r  WalbaumMT-Italic MWalbaum-Italic
mwbri8x  WalbaumExpMT-Italic
mwnr8r   WindsorMT
mwrb8r   WitternbergerFraktMT-Bold
mwrr8r   WitternbergerFraktMT
mygb8r   CenturyGothic-Bold
mygbi8r  CenturyGothic-BoldItalic
mygr8r   CenturyGothic
mygri8r  CenturyGothic-Italic
myhb8r   StrayhornMT-Bold
myhbi8r  StrayhornMT-BoldItalic
myhl8r   StrayhornMT-Light
myhli8r  StrayhornMT-LightItalic
myhr8r   StrayhornMT-Regular
myhri8r  StrayhornMT-Italic
myhx8r   StrayhornMT-ExtraBold
myhxi8r  StrayhornMT-ExtraBoldItalic
mzab8r   MZAntiqua-Bold
mzabi8r  MZAntiqua-BoldItalic
mzar8r   MZAntiqua
```

```
mzari8r   MZAntiqua-Italic
mzcb8r    ZapfChancery-Bold
mzcd8r    ZapfChancery-Demi
mzcmi8r   MZapfChanceryPS-MediumItalic
mzdr      MZapfDingbatsPS
mztb8r    ZeitgeistMT-Bold
mztb8x    ZeitgeistExpertMT-Bold
mztr7a    ZeitgeistMT-Alternative
mztr8r    ZeitgeistMT
mztr8rc   ZeitgeistMT-Condensed
mztr8x    ZeitgeistExpertMT
mztr8xc   ZeitgeistExpertMT-Condensed
mztri8r   ZeitgeistMT-Italic
mztri8x   ZeitgeistExpertMT-Italic
zmztcm8r  ZeitgeistMT-Cameo
zmztcz8r  ZeitgeistMT-CrazyPaving
zmztr8xc  ZeitgeistExpertMT-Cameo
```

A.8 URW fonts

The 'urw.map' file has abbreviations for URW fonts.

```
uagd8r    URWGothicL-Demi
uagdo8r   URWGothicL-DemiObli
uagk8r    URWGothicL-Book
uagko8r   URWGothicL-BookObli
ubkd8r    URWBookmanL-DemiBold
ubkdi8r   URWBookmanL-DemiBoldItal
ubkl8r    URWBookmanL-Ligh
ubkli8r   URWBookmanL-LighItal
ucrb8r    NimbusMonL-Bold
ucrbo8r   NimbusMonL-BoldObli
ucrr8r    NimbusMonL-Regu
ucrro8r   NimbusMonL-ReguObli
uhvb8r    NimbusSanL-Bold
uhvbo8r   NimbusSanL-BoldItal
uhvboc8r  NimbusSanL-ReguCondItal
uhvbrc8r  NimbusSanL-BoldCond
uhvr8r    NimbusSanL-Regu
uhvro8r   NimbusSanL-ReguItal
uhvro8rc  NimbusSanL-BoldCondItal
uhvr8rc   NimbusSanL-ReguCond
uncb8r    CenturySchL-Bold
uncbi8r   CenturySchL-BoldItal
uncr8r    CenturySchL-Roma
uncri8r   CenturySchL-Ital
uplb8r    URWPalladioL-Bold
uplbi8r   URWPalladioL-BoldItal
```

```
uplr8r    URWPalladioL-Roma
uplri8r   URWPalladioL-Ital
usyr      StandardSymL
utmb8r    NimbusRomNo9L-Medi
utmbi8r   NimbusRomNo9L-MediItal
utmr8r    NimbusRomNo9L-Regu
utmri8r   NimbusRomNo9L-ReguItal
uzcmi8r   URWChanceryL-MediItal
uzdr      Dingbats
```

Appendix B   Encodings

The following sections define various encodings as PostScript encoding vectors. These files can be installed in the Dvips header directory and then used in 'psfonts.map' to change font encodings of downloadable or builtin fonts (see section "psfonts.map" in *Dvips*).

You can also specify these '.enc' files to Afm2tfm when building a font (see section "Changing font encodings" in *Dvips*).

B.1 '8a.enc': Adobe standard encoding

```
% @psencodingfile
%   author =  Adobe ,
%   version =  1.0 ,
%   date =  22 June 1996 ,
%   filename =  8a.enc ,
%   email =  kb@mail.tug.org ,
%   address =  135 Center Hill Rd. // Plymouth, MA 02360 ,
%   codetable =  ISO/ASCII ,
%   checksum =  269     317    2399 ,
%   docstring =  Adobe StandardEncoding as an afm2tfm/dvips .enc file.
%
/StandardEncoding [
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
```

```
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/space
/exclam
/quotedbl
/numbersign
/dollar
/percent
/ampersand
/quoteright
/parenleft
/parenright
/asterisk
/plus
/comma
/hyphen
/period
/slash
/zero
/one
/two
/three
/four
/five
/six
/seven
/eight
/nine
/colon
/semicolon
/less
/equal
/greater
/question
/at
/A
/B
/C
/D
/E
/F
/G
```

```
/H
/I
/J
/K
/L
/M
/N
/O
/P
/Q
/R
/S
/T
/U
/V
/W
/X
/Y
/Z
/bracketleft
/backslash
/bracketright
/asciicircum
/underscore
/quoteleft
/a
/b
/c
/d
/e
/f
/g
/h
/i
/j
/k
/l
/m
/n
/o
/p
/q
/r
/s
/t
/u
/v
/w
```

```
/x
/y
/z
/braceleft
/bar
/braceright
/asciitilde
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/exclamdown
/cent
/sterling
/fraction
/yen
/florin
/section
```

```
/currency
/quotesingle
/quotedblleft
/guillemotleft
/guilsinglleft
/guilsinglright
/fi
/fl
/.notdef
/endash
/dagger
/daggerdbl
/periodcentered
/.notdef
/paragraph
/bullet
/quotesinglbase
/quotedblbase
/quotedblright
/guillemotright
/ellipsis
/perthousand
/.notdef
/questiondown
/.notdef
/grave
/acute
/circumflex
/tilde
/macron
/breve
/dotaccent
/dieresis
/.notdef
/ring
/cedilla
/.notdef
/hungarumlaut
/ogonek
/caron
/emdash
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
```

```
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/AE
/.notdef
/ordfeminine
/.notdef
/.notdef
/.notdef
/.notdef
/Lslash
/Oslash
/OE
/ordmasculine
/.notdef
/.notdef
/.notdef
/.notdef
/.notdef
/ae
/.notdef
/.notdef
/.notdef
/dotlessi
/.notdef
/.notdef
/lslash
/oslash
/oe
/germandbls
/.notdef
/.notdef
/.notdef
/.notdef
] def
```

B.2 '8r.enc': TEX base encoding

```
% @psencodingfile
%   author =  S. Rahtz, P. MacKay, Alan Jeffrey, B. Horn, K. Berry ,
%   version =  0.6 ,
```

```
%   date =  22 June 1996 ,
%   filename =  8r.enc ,
%   email =  kb@mail.tug.org ,
%   address =  135 Center Hill Rd. // Plymouth, MA 02360 ,
%   codetable =  ISO/ASCII ,
%   checksum =  119      662     4424 ,
%   docstring =  Encoding for TrueType or Type 1 fonts to be used with TeX. ▮
%
%
% Idea is to have all the characters normally included in Type 1 fonts
% available for typesetting. This is effectively the characters in Adobe
% Standard Encoding + ISO Latin 1 + extra characters from Lucida.
%
% Character code assignments were made as follows:
%
% (1) the Windows ANSI characters are almost all in their Windows ANSI
% positions, because some Windows users cannot easily reencode the
% fonts, and it makes no difference on other systems. The only Windows
% ANSI characters not available are those that make no sense for
% typesetting -- rubout (127 decimal), nobreakspace (160), softhyphen
% (173). quotesingle and grave are moved just because it's such an
% irritation not having them in TeX positions.
%
% (2) Remaining characters are assigned arbitrarily to the lower part
% of the range, avoiding 0, 10 and 13 in case we meet dumb software.
%
% (3) Y&Y Lucida Bright includes some extra text characters; in the
% hopes that other PostScript fonts, perhaps created for public
% consumption, will include them, they are included starting at 0x12.
%
% (4) Remaining positions left undefined are for use in (hopefully)
% upward-compatible revisions, if someday more characters are generally
% available.
%
% (5) hyphen appears twice for compatibility with both ASCII and Windows.▮
%
/TeXBase1Encoding [
% 0x00 (encoded characters from Adobe Standard not in Windows 3.1)
  /.notdef /dotaccent /fi /fl
  /fraction /hungarumlaut /Lslash /lslash
  /ogonek /ring /.notdef
  /breve /minus /.notdef
% These are the only two remaining unencoded characters, so may as
% well include them.
  /Zcaron /zcaron
% 0x10
 /caron /dotlessi
% (unusual TeX characters available in, e.g., Lucida Bright)
```

```
 /dotlessj /ff /ffi /ffl
 /.notdef /.notdef /.notdef /.notdef
 /.notdef /.notdef /.notdef /.notdef
 % very contentious; it's so painful not having quoteleft and quoteright
 % at 96 and 145 that we move the things normally found there down to here.█
 /grave /quotesingle
% 0x20 (ASCII begins)
 /space /exclam /quotedbl /numbersign
 /dollar /percent /ampersand /quoteright
 /parenleft /parenright /asterisk /plus /comma /hyphen /period /slash
% 0x30
 /zero /one /two /three /four /five /six /seven
 /eight /nine /colon /semicolon /less /equal /greater /question
% 0x40
 /at /A /B /C /D /E /F /G /H /I /J /K /L /M /N /O
% 0x50
 /P /Q /R /S /T /U /V /W
 /X /Y /Z /bracketleft /backslash /bracketright /asciicircum /underscore
% 0x60
 /quoteleft /a /b /c /d /e /f /g /h /i /j /k /l /m /n /o
% 0x70
 /p /q /r /s /t /u /v /w
 /x /y /z /braceleft /bar /braceright /asciitilde
 /.notdef % rubout; ASCII ends
% 0x80
 /.notdef /.notdef /quotesinglbase /florin
 /quotedblbase /ellipsis /dagger /daggerdbl
 /circumflex /perthousand /Scaron /guilsinglleft
 /OE /.notdef /.notdef /.notdef
% 0x90
 /.notdef /.notdef /.notdef /quotedblleft
 /quotedblright /bullet /endash /emdash
 /tilde /trademark /scaron /guilsinglright
 /oe /.notdef /.notdef /Ydieresis
% 0xA0
 /.notdef % nobreakspace
 /exclamdown /cent /sterling
 /currency /yen /brokenbar /section
 /dieresis /copyright /ordfeminine /guillemotleft
 /logicalnot
 /hyphen % Y&Y (also at 45); Windows' softhyphen
 /registered
 /macron
% 0xD0
 /degree /plusminus /twosuperior /threesuperior
 /acute /mu /paragraph /periodcentered
 /cedilla /onesuperior /ordmasculine /guillemotright
 /onequarter /onehalf /threequarters /questiondown
```

```
% 0xC0
 /Agrave /Aacute /Acircumflex /Atilde /Adieresis /Aring /AE /Ccedilla
 /Egrave /Eacute /Ecircumflex /Edieresis
 /Igrave /Iacute /Icircumflex /Idieresis
% 0xD0
 /Eth /Ntilde /Ograve /Oacute
 /Ocircumflex /Otilde /Odieresis /multiply
 /Oslash /Ugrave /Uacute /Ucircumflex
 /Udieresis /Yacute /Thorn /germandbls
% 0xE0
 /agrave /aacute /acircumflex /atilde
 /adieresis /aring /ae /ccedilla
 /egrave /eacute /ecircumflex /edieresis
 /igrave /iacute /icircumflex /idieresis
% 0xF0
 /eth /ntilde /ograve /oacute
 /ocircumflex /otilde /odieresis /divide
 /oslash /ugrave /uacute /ucircumflex
 /udieresis /yacute /thorn /ydieresis
] def
```

B.3 'cork.enc': Cork encoding

```
%   This is the Cork encoding, aka EC, Cork, aka TeX Latin 1, as
%   described in TTN 1(4), December 1992, and TUGboat 11(4), November
%   1990, page 514. EC is the name of the Computer Modern-based fonts in
%   this encoding. NFSS and Fontinst know it by 'T1'.
%
%   These are the ligs and kerns in addition to those found in the
%   AFM file.  (The only ligs in the Times-Roman.afm file are the
%   fi and fl ligatures.)
%
% LIGKERN space l =: lslash ; space L =: Lslash ;
% LIGKERN question quoteleft =: questiondown ; exclam quoteleft =: exclamdown ;
% LIGKERN hyphen hyphen =: endash ; endash hyphen =: emdash ;
% LIGKERN quoteleft quoteleft =: quotedblleft ;
% LIGKERN quoteright quoteright =: quotedblright ;
%
%   We blow away kerns to and from spaces (TeX doesn't have a
%   space) and also remove any kerns from the numbers (although
%   the only kern pair that mentions a number in Times-Roman.afm
%   is one one.)
%
% LIGKERN space  * ; *  space ; zero  * ; *  zero ;
% LIGKERN one  * ; *  one ; two  * ; *  two ;
```

```
% LIGKERN three  * ; *  three ; four  * ; *  four ;
% LIGKERN five  * ; *  five ; six  * ; *  six ;
% LIGKERN seven  * ; *  seven ; eight  * ; *  eight ;
% LIGKERN nine  * ; *  nine ;
% LIGKERN comma comma =: quotedblbase ; less less =: guillemotleft ;
% LIGKERN greater greater =: guillemotright ;
%
/CorkEncoding [              % now 256 chars follow
% 0x00
  /grave /acute /circumflex /tilde /dieresis /hungarumlaut /ring /caron
  /breve /macron /dotaccent /cedilla
  /ogonek /quotesinglbase /guilsinglleft /guilsinglright
% 0x10
  /quotedblleft /quotedblright /quotedblbase /guillemotleft
  /guillemotright /endash /emdash /compworkmark
  /perthousandzero /dotlessi /dotlessj /ff /fi /fl /ffi /ffl
% 0x20
  /visualspace /exclam /quotedbl /numbersign
  /dollar /percent /ampersand /quoteright
  /parenleft /parenright /asterisk /plus /comma /hyphen /period /slash
% 0x30
  /zero /one /two /three /four /five /six /seven
  /eight /nine /colon /semicolon /less /equal /greater /question
% 0x40
  /at /A /B /C /D /E /F /G /H /I /J /K /L /M /N /O
% 0x50
  /P /Q /R /S /T /U /V /W
  /X /Y /Z /bracketleft /backslash /bracketright /asciicircum /underscore
% 0x60
  /quoteleft /a /b /c /d /e /f /g /h /i /j /k /l /m /n /o
% 0x70
  /p /q /r /s /t /u /v /w
  /x /y /z /braceleft /bar /braceright /asciitilde /hyphen
% 0x80
  /Abreve /Aogonek /Cacute /Ccaron /Dcaron /Ecaron /Eogonek /Gbreve
  /Lacute /Lcaron /Lslash /Nacute /Ncaron /Ng /Ohungarumlaut /Racute
% 0x90
  /Rcaron /Sacute /Scaron /Scedilla
  /Tcaron /Tcedilla /Uhungarumlaut /Uring
  /Ydieresis /Zacute /Zcaron /Zdotaccent /IJ /Idotaccent /dbar /section
% 0xA0
  /abreve /aogonek /cacute /ccaron /dcaron /ecaron /eogonek /gbreve
  /lacute /lcaron /lslash /nacute /ncaron /ng /ohungarumlaut /racute
% 0xB0
  /rcaron /sacute /scaron /scedilla
  /tquoteright /tcedilla /uhungarumlaut /uring
  /ydieresis /zacute /zcaron /zdotaccent
  /ij /exclamdown /questiondown /sterling
```

```
% 0xC0
  /Agrave /Aacute /Acircumflex /Atilde /Adieresis /Aring /AE /Ccedilla
  /Egrave /Eacute /Ecircumflex /Edieresis
  /Igrave /Iacute /Icircumflex /Idieresis
% 0xD0
  /Eth /Ntilde /Ograve /Oacute /Ocircumflex /Otilde /Odieresis /OE
  /Oslash /Ugrave /Uacute /Ucircumflex /Udieresis /Yacute /Thorn /Germandbls
% 0xE0
  /agrave /aacute /acircumflex /atilde /adieresis /aring /ae /ccedilla
  /egrave /eacute /ecircumflex /edieresis
  /igrave /iacute /icircumflex /idieresis
% 0xF0
  /eth /ntilde /ograve /oacute /ocircumflex /otilde /odieresis /oe
  /oslash /ugrave /uacute /ucircumflex /udieresis /yacute /thorn /germandbls
] def
```

B.4 'dvips.enc': Dvips encoding

```
% @psencodingfile
%   author =  T. Rokicki, K. Berry ,
%   version =  2.0 ,
%   date =  22 June 1996 ,
%   filename =  dvips.enc ,
%   email =  kb@mail.tug.org ,
%   address =  135 Center Hill Rd. // Plymouth, MA 02360 ,
%   codetable =  ISO/ASCII ,
%   checksum =  75     515    3715 ,
%   docstring =  An encoding for PostScript fonts to be used with TeX.
%
%
% This is almost the default encoding produced by the afm2tfm program
% that comes with the dvips distribution, when it is applied to a
% StandardEncoding PostScript font.  The positions of the accented
% characters (which afm2tfm assigned more or less randomly in the
% previous set of fonts) have been held fixed.
%
% It is almost upward-compatible with TeX text.  (The primary exceptions
% are dotaccent and hungarumlaut.)  Some of the ligatures are also in
% different positions, but this is not important, since ligature
% positions are defined in the TFM file, not by macros.
%
% The character positions were assigned in this order:
%   1) non-composite characters in the afm2tfm encoding (except dotlessj
%        was included in its plain TeX position);
%   2) available characters in the Cork (EC) encoding;
```

```
%   3) remaining composite characters in the base encoding (starting at
%      position 130 decimal).  We don't include all the other base
%      characters because that changes the height/depth/width tables in
%      the TFM files (because more characters mean more distinct values).
%
% We leave the initial positions open for the Greek letters in Times-Roman.
%
/DvipsEncoding [
  /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
  /.notdef /.notdef /.notdef /.notdef
    /.notdef /quotesingle /exclamdown /questiondown
  /dotlessi /dotlessj /grave /acute /caron /breve /macron /ring
  /cedilla /germandbls /ae /oe /oslash /AE /OE /Oslash
  /space /exclam /quotedbl /numbersign /dollar /percent /ampersand /quoteright
  /parenleft /parenright /asterisk /plus /comma /hyphen /period /slash
  /zero /one /two /three /four /five /six /seven
  /eight /nine /colon /semicolon /less /equal /greater /question
  /at /A /B /C /D /E /F /G
  /H /I /J /K /L /M /N /O
  /P /Q /R /S /T /U /V /W
  /X /Y /Z /bracketleft /backslash /bracketright /circumflex /underscore
  /quoteleft /a /b /c /d /e /f /g
  /h /i /j /k /l /m /n /o
  /p /q /r /s /t /u /v /w
  /x /y /z /braceleft /bar /braceright /tilde /dieresis
  /asciicircum /asciitilde /Ccedilla /Iacute
      /Icircumflex /atilde /edieresis /egrave
  /scaron /zcaron /Eth /ff /ffi /ffl /.notdef /.notdef
  /.notdef /.notdef /Scaron /.notdef /.notdef /.notdef /.notdef /.notdef
  /Ydieresis /.notdef /Zcaron  /.notdef /.notdef /.notdef /.notdef /.notdef
  /.notdef /.notdef /cent /sterling /fraction /yen /florin /section
  /currency /copyright /quotedblleft /guillemotleft
      /guilsinglleft /guilsinglright /fi /fl
  /degree /endash /dagger /daggerdbl /periodcentered /.notdef /paragraph /bullet
  /quotesinglbase /quotedblbase /quotedblright /guillemotright
      /ellipsis /perthousand /.notdef /.notdef
  /Agrave /Aacute /Acircumflex /Atilde /Adieresis /Aring /.notdef /dotaccent
  /Egrave /Eacute /Ecircumflex /Edieresis
      /Igrave /hungarumlaut /ogonek /Idieresis
  /emdash /Ntilde /Ograve /Oacute /Ocircumflex /Otilde /Odieresis /.notdef
  /.notdef /Ugrave /Uacute /Ucircumflex /Udieresis /Yacute /Thorn /.notdef
  /agrave /aacute /acircumflex /ordfeminine
      /adieresis /aring /.notdef /ccedilla
  /Lslash /eacute /ecircumflex /ordmasculine
      /igrave /iacute /icircumflex /idieresis
  /.notdef /ntilde /ograve /oacute /ocircumflex /otilde /odieresis /.notdef
  /lslash /ugrave /uacute /ucircumflex /udieresis /yacute /thorn /ydieresis
] def
```

B.5 'texmext.enc': TₑX math symbol encoding

```
% TeX math extension encoding.
% No ligatures or kerns.
%
/TeXMathExtensionEncoding [        % now 256 chars follow

% 0x0
/parenleftbig
/parenrightbig
/bracketleftbig
/bracketrightbig
/floorleftbig
/floorrightbig
/ceilingleftbig
/ceilingrightbig

% 0x8
/braceleftbig
/bracerightbig
/angbracketleftbig
/angbracketrightbig
/vextendsingle
/vextenddouble
/slashbig
/backslashbig

% 0x10
/parenleftBig
/parenrightBig
/parenleftbigg
/parenrightbigg
/bracketleftbigg
/bracketrightbigg
/floorleftbigg
/floorrightbigg

% 0x18
/ceilingleftbigg
/ceilingrightbigg
/braceleftbigg
/bracerightbigg
/angbracketleftbigg
/angbracketrightbigg
/slashbigg
/backslashbigg

% 0x20
```

```
/parenleftBigg
/parenrightBigg
/bracketleftBigg
/bracketrightBigg
/floorleftBigg
/floorrightBigg
/ceilingleftBigg
/ceilingrightBigg

% 0x28
/braceleftBigg
/bracerightBigg
/angbracketleftBigg
/angbracketrightBigg
/slashBigg
/backslashBigg
/slashBig
/backslashBig

% 0x30
/parenlefttp
/parenrighttp
/bracketlefttp
/bracketrighttp
/bracketleftbt
/bracketrightbt
/bracketleftex
/bracketrightex

% 0x38
/bracelefttp
/bracerighttp
/braceleftbt
/bracerightbt
/braceleftmid
/bracerightmid
/braceex
/arrowvertex

% 0x40
/parenleftbt
/parenrightbt
/parenleftex
/parenrightex
/angbracketleftBig
/angbracketrightBig
/unionsqtext
/unionsqdisplay
```

```
% 0x48
/contintegraltext
/contintegraldisplay
/circledottext
/circledotdisplay
/circleplustext
/circleplusdisplay
/circlemultiplytext
/circlemultiplydisplay

% 0x50
/summationtext
/producttext
/integraltext
/uniontext
/intersectiontext
/unionmultitext
/logicalandtext
/logicalortext

% 0x58
/summationdisplay
/productdisplay
/integraldisplay
/uniondisplay
/intersectiondisplay
/unionmultidisplay
/logicalanddisplay
/logicalordisplay

% 0x60
/coproducttext
/coproductdisplay
/hatwide
/hatwider
/hatwidest
/tildewide
/tildewider
/tildewidest

% 0x68
/bracketleftBig
/bracketrightBig
/floorleftBig
/floorrightBig
/ceilingleftBig
/ceilingrightBig
```

```
        /braceleftBig
        /bracerightBig

        % 0x70
        /radicalbig
        /radicalBig
        /radicalbigg
        /radicalBigg
        /radicalbt
        /radicalvertex
        /radicaltp
        /arrowvertexdbl

        % 0x78
        /arrowtp
        /arrowbt
        /bracehtipdownleft
        /bracehtipdownright
        /bracehtipupleft
        /bracehtipupright
        /arrowdbltp
        /arrowdblbt

        % Have to have 128 .notdef's now to fill things out.
        %
        /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
        /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
        /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
        /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
        /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
        /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
        /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
        /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
        /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
        /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
        /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
        /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
        /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
        /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
        /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
        /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
        ] def
```

B.6 'texmsym.enc': TeX math symbol encoding

```
        % TeX math symbols encoding.
        % No ligatures or kerns.
```

```
%
/TeXMathSymbolEncoding [            % now 256 chars follow
% 0x0
/minus
/periodcentered
/multiply
/asteriskmath
/divide
/diamondmath
/plusminus
/minusplus

% 0x8
/circleplus
/circleminus
/circlemultiply
/circledivide
/circledot
/circlecopyrt
/openbullet
/bullet

% 0x10
/equivasymptotic
/equivalence
/reflexsubset
/reflexsuperset
/lessequal
/greaterequal
/precedesequal
/followsequal

% 0x18
/similar
/approxequal
/propersubset
/propersuperset
/lessmuch
/greatermuch
/precedes
/follows

% 0x20
/arrowleft
/arrowright
/arrowup
/arrowdown
/arrowboth
```

```
/arrownortheast
/arrowsoutheast
/similarequal

% 0x28
/arrowdblleft
/arrowdblright
/arrowdblup
/arrowdbldown
/arrowdblboth
/arrownorthwest
/arrowsouthwest
/proportional

% 0x30
/prime
/infinity
/element
/owner
/triangle
/triangleinv
/negationslash
/mapsto

% 0x38
/universal
/existential
/logicalnot
/emptyset
/Rfractur
/Ifractur
/latticetop
/perpendicular

% 0x40
/aleph
/A
/B
/C
/D
/E
/F
/G

% 0x48
/H
/I
/J
```

```
/K
/L
/M
/N
/O

% 0x50
/P
/Q
/R
/S
/T
/U
/V
/W

% 0x58
/X
/Y
/Z
/union
/intersection
/unionmulti
/logicaland
/logicalor

% 0x60
/turnstileleft
/turnstileright
/floorleft
/floorright
/ceilingleft
/ceilingright
/braceleft
/braceright

% 0x68
/angbracketleft
/angbracketright
/bar
/bardbl
/arrowbothv
/arrowdblbothv
/backslash
/wreathproduct

% 0x70
/radical
```

```
/coproduct
/nabla
/integral
/unionsq
/intersectionsq
/subsetsqequal
/supersetsqequal

% 0x78
/section
/dagger
/daggerdbl
/paragraph
/club
/diamond
/heart
/spade

% Have to have 128 .notdef's now to fill things out.
%
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
] def
```

B.7 'texmital.enc': TeX math italic encoding

```
% TeX math italic encoding.
% No ligatures or kerns.
%
/TeXMathItalicEncoding [          % now 256 chars follow
% 0x0
/Gamma
/Delta
```

```
/Theta
/Lambda
/Xi
/Pi
/Sigma
/Upsilon

% 0x8
/Phi
/Psi
/Omega
/alpha
/beta
/gamma
/delta
/epsilon1

% 0x10
/zeta
/eta
/theta
/iota
/kappa
/lambda
/mu
/nu

% 0x18
/xi
/pi
/rho
/sigma
/tau
/upsilon
/phi
/chi

% 0x20
/psi
/omega
/epsilon
/theta1
/pi1
/rho1
/sigma1
/phi1

% 0x28
```

```
/arrowlefttophalf
/arrowleftbothalf
/arrowrighttophalf
/arrowrightbothalf
/arrowhookleft
/arrowhookright
/triangleright
/triangleleft

% 0x30
/zerooldstyle
/oneoldstyle
/twooldstyle
/threeoldstyle
/fouroldstyle
/fiveoldstyle
/sixoldstyle
/sevenoldstyle

% 0x38
/eightoldstyle
/nineoldstyle
/period
/comma
/less
/slash
/greater
/star

% 0x40
/partialdiff
/A
/B
/C
/D
/E
/F
/G

% 0x48
/H
/I
/J
/K
/L
/M
/N
/O
```

```
% 0x50
/P
/Q
/R
/S
/T
/U
/V
/W

% 0x58
/X
/Y
/Z
/flat
/natural
/sharp
/slurbelow
/slurabove

% 0x60
/lscript
/a
/b
/c
/d
/e
/f
/g

% 0x68
/h
/i
/j
/k
/l
/m
/n
/o

% 0x70
/p
/q
/r
/s
/t
/u
```

```
/v
/w

% 0x78
/x
/y
/z
/dotlessi
/dotlessj
/weierstrass
/vector
/tie

% Have to have 128 .notdef's now to fill things out.
%
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
/.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef /.notdef
] def
```

Appendix C Font legalities

This section owes a great deal to Charles Bigelow (co-designer with Kris Holmes of the Lucida typeface family, among others), who has generously answered our many queries about fonts and the law around the world with remarkable patience and understanding. (But he is naturally not responsible for any errors here, much less our opinions.)

Fonts have always been treated rather strangely under the law, as befits their rather strange nature: letterforms are indivisibly both *useful* and *artistic*. In most countries—in all countries until recently—utility has taken precedence; i.e., it has been legal to copy fonts without permission or fee.

In any case, to the best of my knowledge, the situation in those countries which have adopted any sort of typeface protection is as follows:

United States

> Typeface designs can be patented, but not copyrighted. Only a few designs have been patented. (Lucida and Stone are the only ones I know of. I don't know what the grounds were for patenting Stone, but Lucida had some novel features in its design which make it reasonable to patent, given the acceptance of the patent system in the first place.)

> Particular programs which instantiate a font can be copyrighted just as any other computer program can. This is arguably wrong, since font programs are nothing but a description of the shapes, possibly with some simple hints, and there's only one basic way to describe the shapes in any given language. Thus, the creativity lies in making the shape right, not in making the computer program right, so it would seem that to be consistent, the copyright laws should protect the design, not the program—the opposite of the current situation.

Germany
> Typeface designs have been copyrightable as original works of art since 1981. As a result, many (perhaps most) designs have been copyrighted there. The law is not retroactive, but German courts have upheld the intellectual property rights of designers of earlier fonts as well: In one case the heirs of Paul Bauer (designer of Futura) won a suit against the Bauer foundry for arbitrarily discontinuing a portion of their royalties.

England
> A copyright law passed in 1989 covers typeface designs first published in England (or published in Britain within 30 days of its publication elsewhere), and it *is* retroactive. It's unclear how far back the law extends, but Times Roman, designed in the late 1920's and 1930's by Stanley Morison and cut by Victor Lardent for Monotype is probably covered. This does not mean GNU (for example) cannot have a Times Roman; it just means we cannot start with an English version, as the law does not forbid importing foreign versions of English typefaces.

France
> The Romain du Roi typeface designed by Philippe Grandjean in 1702 for the French royal family is protected, and perhaps other such "royal" designs. There is no protection for designs in general.

In 1973 the international Vienna treaty on typeface design protection was proposed. France ratified it in 1974 or 1975, and Germany in 1981. The English law might constitute ratification, but this has not been settled. In any case, since at least four countries have to ratify it before it takes effect (and even then it takes effect only in those countries which ratify it), it is still of no consequence for now.

Index

Table of Contents