Annex A
(normative)

Typeface design grouping

This annex defines a typeface design grouping scheme, consisting of a three-level hierarchical structure. Typefaces which are similar in appearance or have characteristics that would allow them to be reasonably substituted for each other are grouped together.

Some font designs could be associated with more than one design group, but it is the responsibility of the font designer or font resource generator to choose the group which provides the best appearance for substitution.

The highest (most general) level of the hierarchy is the ISO Class, the second level of the hierarchy is the ISO Subclass, and the third (most specific) level of the hierarchy is the ISO Specific Group. A typeface that is representative of each specific group is shown and named.

NOTE 42 Throughout this grouping scheme, the term "serif" refers to the traditional concept of the serifs of Roman typefaces as well as to any style of non-plain stroke-ending used in a non-Western typeface.

1.0.0 - Uncials class

Typefaces in this general category use as a source of their design writing hands of Europe used during the 6th to the 9th Century.

1.1.0 - Single alphabet subclass

These designs are partly characterized by having one alphabet and within that alphabet design are both upper and lowercase letter shapes.

1.1.1 - Sans serif

Without serifs

1.1.2 - Serif

With serifs

Figure A.2 — Amsterdam LIBRA

1.2.0 - Duplex alphabet subclass

The designs of this sub-class are characterized primarily by having distinct and separate upper and lowercase letter shapes.

1.2.1 - Sans serif

Without serifs

Figure A.3 — (---)

1.2.2 - Serif

With serifs

Figure A.4 — Klingspor AMERICAN UNCIAL

2.0.0 - Inscriptionals class

Latin alphabets of this general class have the characteristics of having been cut in stone. There are only uppercase letters and they are generally based on the proportions of the classic Roman Inscriptional letter

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form, e.g., having a narrow "E", "F", and "L"; sweeping tail on the "R".

2.1.0 - Solids subclass
These designs have solid stems.

2.1.1 - Sans serif
Without serifs

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ABCDEF
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Figure A.5 — Adobe LITHOS

2.1.2 - Serif
With serifs

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SAWUNDRICK
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Figure A.6 — Stempel SISTINA

2.2.0 - Inlines subclass
These designs have a fine line engraved in the stem.

2.2.1 - Sans serif
Without serifs

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Figure A.7 — ( --- )
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2.2.2 - Serif
With serifs

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GMORTY
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Figure A.8 — Nebiolo AUGUSTEA INLINE

2.3.0 - Outlines subclass
The designs of this subclass are characterized by single lines that define the contour or outline of the letters.

2.3.1 - Sans serif
Without serifs

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Figure A.9 — ( --- )
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2.3.2 - Serif
With serifs

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GMORTY
```

Figure A.10 — Bauer COLUMNNA

2.3.3 - Blackletters class
Typefaces of this general category have designs which show characteristics resembling those of the writing hands of the German monasteries circa the 12th to the 14th century. Or, they are based on the typestyle designs of the German printers of the late 1400's.

3.0.0 - Blackletters class
Typefaces of this general category have designs which show characteristics resembling those of the writing hands of the German monasteries circa the 12th to the 14th century. Or, they are based on the typestyle designs of the German printers of the late 1400's.

3.1.0 - Formal style subclass
The designs of this subclass are characterized by their condensed appearance; large x-height; with little or no curves, giving an angular look to the lowercase.
They are based on the formal or ecclesiastical writing style that was reserved for the Bible.

3.1.1 - Sans serif
Without serifs

3.1.4 - Serif, engraved
The designs of this specific group have serifs and have hatching or shading in the stems.

3.1.2 - Serif
With serif

3.2.0 - Round style subclass
The designs of this subclass are characterized by their rounded design.

3.2.1 - Sans serif
Without serifs

3.2.2 - Serif
With serifs

3.1.3 - Sans serif, engraved
The designs of this specific group have no serifs and have a pattern of hatching or shading in the stems.

3.2.3 - Sans serif, engraved
The designs of this specific group have no serifs and have a pattern of hatching or shading in the stems.
The designs of this specific group have no serifs and have a pattern of hatching or shading in the stems.

3.3.4 - Serif, engraved
The designs of this specific group have serifs and have hatching or shading in the stems.

3.3.0 - Hybrid style subclass
The designs of this subclass are characterized by their mixture of both Blackletters Formal style and the Serifs style (4.1.1) designs. The historical models for this design are from the late 1400's. (Subiaco Monastery; Da Spira Brothers)

3.3.1 - Sans serif
Without serifs

**MORTY Spabelg**

Figure A.22 — Klingspor WALLAU

3.3.2 - Serif
With serifs.

**G MORT Spabelg**

Figure A.23 — Stephenson Blake BOLOGNA

3.3.3 - Sans serif, engraved

3.4.0 - Informal style subclass
The designs of this subclass are of a cursive style, having the appearance of a rapidly written design.

3.4.1 - Sans serif
Without serifs

**Acc Mordica**

Figure A.27 — Bauer LEGEND
3.4.3 - Sans serif, engraved

The designs of this specific group have no serifs and have a pattern of hatching or shading in the stems.

Figure A.29 — (---)

3.4.4 - Serif, engraved

The designs of this specific group have serifs and have hatching or shading in the stems.

Figure A.30 — (---)

4.0.0 - Serifs class

Typefaces in this general category have designs which have serifs, and are not classed in the Uncials, Inscriptionals, Blackletters, or Ornamentals.

4.1.0 - Oldstyle subclass

The typeface design in this category show characteristics of the designs originally created in Europe between the late 15th Century and the 17th Century.

4.1.1 - Venetian

The Latin-alphabet typeface designs in this category have a diagonal bar on the lowercase "e"; relatively monotone stem thickness; have a sweeping tail on the uppercase "R"; and are based on the type styles of the early Venetian printers circa 1470-1490's.

4.1.2 - Gara

These typefaces are generally based on the original typeface designs of printers such as Aldus Manutius and Claude Garamond. General characteristics of the Latin-alphabet typefaces are ascenders taller than the capitals, and a horizontal bar on the lowercase "e".

Figure A.31 — Ludlow EUSEBIUS

4.1.3 - Dutch / English

Latin-alphabet typefaces in this category are characterized in part by a wedge shaped serif on the lowercase "t", spur serif on the capital "G", and a concave apex on the capital "A".

Figure A.32 — Monotype GARAMOND

4.2.0 - Transitional subclass

Typefaces in this grouping are those that show characteristics in common with the designs of faces that followed after W. Caslon (circa 1720) and before G. Bodoni (circa 1800).

4.2.1 - Direct Line

Typefaces in this category are characterized by fine serifs and noticeable contrast. In Latin-alphabet typefaces, capital letters are nearly all the same width. These typefaces have characteristics in common with the early English designs from the early 1700's to the 1800's (e. g., Baskerville, Bulmer, Bell).
4.2.2 - Modified

These faces, although based on the same models as above (European designs of the 1700's), are so significantly different that they cannot fit into the direct line category.

4.3.2 - Fat Face

The principal characteristics are in common with those of the typefaces of English origin based on the type designs of W. Thawowgood.

4.3.0 - Modern subclass

Extreme contrast between the thick and thin portions of the characters. Hairline serifs and a condensed appearance are some of the characteristics of this group of typefaces.

4.3.1 - Continental

These designs are based on, or exhibit characteristics in common with the typestyles of the Italian printer, Bodoni, or the French printer, Didot.

4.4.0 - Contemporary subclass

This particular group does not have any clear recognizable historical model.

4.4.1 - Eclectic

These particular typefaces are of mixed design form in which a variety of derivatives are recognizable.
4.4.2 - Fine serif
Indicates that the serifs are very small, pointed, with small bracketing.

4.4.3 - Lettering
Type designs that give the impression of, or are based on, the lettering styles of American sign painters of the early 20th Century.

4.5.0 - Legibility subclass
Obvious characteristics of Western-alphabet typefaces of this group are large x-height, short ascenders and descenders.

4.5.1 - Rounded (traditional)
These designs were originally intended to be used for newspapers. In Western-alphabet typefaces of this group, the letters "c", "e", "o" are based on traditional rounded forms.

4.5.2 - Super-elliptical (square)
The letters "c", "e", and "o" of Western-alphabet typefaces of this group are based on a super-elliptical (squared-off ellipse) design.

4.6.0 - Square serif subclass
The serifs in all these designs are relatively heavy and may or may not be bracketed.

4.6.1 - Monotone
The designs of this specific group are characterized by serifs that are the same weight (thickness) as the stems, with no fillets or brackets connecting the stems and serifs.
4.6.2 - Clarendon
The designs of this specific group are characterized by serfs that are the same weight (thickness) as the stems, with brackets connecting the stems and serifs.

4.6.3 - French Clarendon
The designs of this specific group are characterized by serfs that are thicker than the stems, and can have brackets between the stems and serifs.

4.6.4 - Short (stub) Serfs
The main distinguishing features of these designs are small stubby serfs and relatively bold stems.

4.6.5 - Typewriter
Designs that were originally intended for typewriters or those faces designed to appear as though they were produced on a typewriter.

4.6.6 - Dot matrix
The faces in this group appear to have been produced by a dot matrix output device.

4.7.0 - Latin subclass
These designs are characterized by serfs that have angled fillets, giving the appearance of triangular shaped serifs.

4.7.1 - Solid
The stems of the characters are solid.

4.8.0 - Engraving subclass
Typefaces that are based upon the designs of the copper-plate engravers.

4.8.1 - Barbed serif
This group of typefaces has serifs with end points bifurcated or barbed.

Figure A.58 — NICHOLAS COCHIN

4.8.2 - Straight serif (fine)
The main characteristics of this group are very small and pointed serifs, with small fillets. In alphabetic typefaces the letters are all uppercase.

Figure A.59 — ATF COPPERPLATE GOTHIC

4.9.0 - Free Form subclass
Characterized by twining fronds, sinuous curves, etc.

4.9.1 - Solid
The typefaces in this group have ornaments and styling derived from, or influenced by, the Art Nouveau movements of the late 1800's and the early 1900's; the stems are solid.

Figure A.60 — Weisert ARNOLD BOCKLIN

4.9.2 - Outline
The typefaces in this group have ornaments and styling derived from, or influenced by, the Art Nouveau movements of the late 1800's and the early 1900's; the stems are defined by lines of equal width.

4.10.0 - Computer subclass
The primary characteristics of these faces are that they give the appearance of faces associated with computer printouts and computer display faces.

4.10.1 - OCR
The designs were created originally to be machine readable. However, they may now only carry the type design but not the function.

4.11.0 - Miscellaneous subclass
Any typeface that has serifs and does not fit into any of the previous categories.

4.12.0 - Mincho subclass
Has thick vertical strokes and thin horizontal strokes. There is a noticeable wedge shape ending on the right end of the horizontal strokes.

4.12.1 - Old Style
Stems and strokes are composed of smooth outlines. Counters are comparatively small and the metrics difference between letters is larger than that of the New Style.

4.12.2 - New Style
Stems and strokes edges are sharper than the Old Style Mincho. The counters are large and the metrics difference between the letters is small.

4.12.3 - Miscellaneous
Any Mincho design that does not fall into New Style or Old Style.

5.0.0 - Sans serif class
Typefaces in this general category have designs that do not have serifs, and are not Scripts or Ornamentals.

5.1.0 - Gothic subclass
The earliest of the Latin-alphabet sans serif printing typefaces (circa 1915).

5.1.1 - Grotesque
The Latin-alphabet designs of this specific group are characterized by a two storey lowercase "a" and "g"; and may have a spur serif on the uppercase "G."

GMOR Spaesg
Figure A.68 — ATF FRANKLIN GOTHIC

För allanya st
Figure A.69 — Monotype GILL SANS

χρησίμων ΖΗΘΙΚΑ
Figure A.70 — Greek: Monotype GILL SANS

5.1.2 - Neo-grotesque
The Latin-alphabet designs of this specific group have a two storey lowercase "a" and a one storey lowercase "g"; and may have a spur serif on the uppercase "G."

EGMORTarbesg
Figure A.71 — Haas HELVETICA
5.1.3 - Typewriter

These are faces that were intended for typewriter composition or those faces designed to appear as though they were produced on a typewriter.

5.2.0 - Humanist subclass

Sans serif typefaces based on or inspired by classical Roman proportions.

5.2.1 - Classical

Characteristics of these typefaces include stems have subtle stress variation. Western-alphabet typefaces of this group have uppercase letters with classic Roman Inscriptional proportions, and, in Latin alphabets, two storey lowercase “a” and “g”.

5.2.2 - Non-classical

Stem contrast is greater; Western alphabet typefaces have two storey lowercase “a” and “g”; may or may not have the capitals in the classical letter form proportions.
5.3.2 - Casual
Informal designs, with no real classical proportions.

5.3.3 - Typewriter
Typewriter typeface designs.

5.4.0 - Art Deco subclass
The display typeface designs of the 1920's

5.4.1 - Standard
Extreme contrast, one stem is very bold, arms and bowls are very thin.
5.5.0 - Geometric subclass

The design is monotone, and is basically composed of circles and straight lines.

5.5.1 - Round, straight stem ends

Monotone design, with what may be referred to as "stick characters." In some instances the ascenders may be longer than the descenders. The ends of the stems are straight.

ORTY Sparbesg

Figure A.89 — Bauer FUTURA

5.5.2 - Round, Rounded stem ends

Monotone design, with what may be referred to as "stick characters." In some instances the ascenders may be longer than the descenders. In both Western and Japanese type designs the tips or ends of the stems are rounded.

Figure A.90 — Burmese Typestyle

Figure A.91 — Thai Typestyle

5.5.3 - Super-elliptical

The main characteristic is that in Western alphabet designs, the shape of all traditionally rounded letters, such as "o", "c", "e", are based on the super-ellipse (a squared-off ellipse).

Figure A.93 — Sha-ken NARD

5.5.4 - Stylized

Monotone design, but less formal, may have curves in the stems and not appear as structured.

Figure A.94 — Nebiolo EUROSTYLE

5.5.5 - Typewriter

These are faces that were intended for typewriter composition or those faces designed to appear as though they were produced on a typewriter.

Figure A.95 — ATF HOBO

Figure A.96 — Ryobi MAGIC

ABCDEF no

Figure A.92 — VAG RUNDSCHRIFT
5.6.0 - Computer subclass
The primary characteristic of these faces is that they give the appearance of faces associated with computer printouts and computer display faces.

5.6.1 - OCR
The designs were created originally to be machine readable. However, they may now only carry the type design style, but not the function.

5.7.0 - Free Form subclass
Characterized by twining fronds, sinuous curves, etc.

5.7.1 - Solid
The typefaces in this group have ornaments and styling derived from, or influenced by the Art Nouveau movements of the late 1800's and the early 1900's.

5.7.2 - Outline
The typefaces in this group have ornaments and styling derived from, or influenced by the Art Nouveau movements of the late 1800's and the early 1900's; the stems are defined by lines of equal weight.

5.8.0 - Miscellaneous subclass
Any typeface that is a Sans Serif and does not fit into any of the previous categories.

6.0.0 - Scripts class
These faces are designed to resemble handwriting.

6.1.0 - Joined subclass
The characters are connected.

6.1.1 - Formal
Based on a writing style characterized by extreme contrast between the thick and thin parts of the letters.

Ace Mordich

68
6.1.2 - Informal
Conveying the style of a rapidly written script. The stems have thick and thin characteristics.

Figure A.105 — Olive MISTRAL

Figure A.106 — Ryobi YUKINARI E

Figure A.107 — Arabic Typestyle

6.2.2 - Informal
A rapidly drawn letter with contrast.

Figure A.109 — Stempel VIRTUOSA

6.2.3 - Monotone
All strokes of the letters are of equal width.

Figure A.110 — Monotype PEPITA

Figure A.111 — Bauer GILLES GOTHIC

6.3.3 - Monotone
All strokes are of equal thickness

Figure A.108 — ATF KAUFMANN

6.2.0 - Unjoined subclass
The letters, when composed into words, have space between the adjacent characters.

6.2.1 - Formal
Based on a writing style that is characterized by extreme contrast between the thick and thin parts of the letters.

Figure A.113 — Klingspor SALTINO

Figure A.112 — Arabic Typestyle
and therefore the edges of the stems and strokes are not as sharp.

6.3.1 - Kaisho

All the stems appear to have been written by a soft brush. The stems thickness may vary and there may be a different width-to-height.

6.3.2 - Kyokasho

Simplified version of 6.3.1. Used mainly for children's books and textbooks. The width-to-height ratio of the glyph shape is the same, and any metric differences between the glyphs are small.

6.3.3 - Gyosho

Some of the strokes are smoothly connected to show loci of the brush strokes.

6.3.4 - Sosho

Most of the strokes are smoothly connected and therefore dotted strokes could not be identified. It is more simplified than Gyosho (6.3.3).
6.3.5 - Miscellaneous

Any designs that do not fit in any of the above specific groups.

6.4.0 - Kana subclass (Japan)

The designs are based on the same concept as Mincho. However, they can only be applied to Kana glyph collections.

6.4.1 - Old Style

Stems are made up of smooth lines. Counters are comparatively small and the metric differences between glyphs are larger than that of the New Style (6.4.2)

6.5.0 - Soucho subclass (China / Japan)

Strokes (horizontal) are inclined slightly upward and to the right. The thickness of the stems is approximately the same as the stroke width. The sharpness of the edges of the stems and strokes is the same as if it had been produced by engraving in wood.

7.0.0 - Ornamentals class

Typefaces that were meant for display (not meant for straight matter composition text”, e.g., headlines) and can be highly decorated or stylized and cannot fit into any of the other categories.

7.1.0 - Inline subclass

The stems of the letters have a fine line or lines engraved in the stem. The original faces were intended for display purposes. The lines that define the glyph shape are of two different weights.

7.1.1 - Sans serif

Without serifs.

7.1.2 - Serif

With serifs.
7.2.0 - Outline subclass
The glyph shape of this design is defined by lines of a single weight.
7.2.1 - Sans serif
Without serifs.

Figure A.128 — ATF GOTHIC OUTLINE

7.3.0 - Decorative subclass
The general characteristics of these faces are that they have patterns such as floral or leaf, or the stems are composed of or made up with natural elements such as twigs, or animals, etc.
7.3.1 - Sans serif
Without serifs.

Figure A.129 — Morisawa ARROW G-LINE

7.3.2 - Serif
With serifs.

Figure A.130 — 12 Line Antique Open

7.4.0 - Three-dimensional subclass
These type designs have a three-dimensional appearance created by means of shading and geometrical effects.
7.4.1 - Sans serif
Without serifs.

Figure A.133 — Ludlow UMBRA

7.4.2 - Serif
With serifs.

Figure A.134 — Sha-ken NAR SHADOW

Figure A.135 — Stephenson Blake THORNE SHADED
7.5.0 - Tuscan subclass
It is a characteristic of this design to have a double curved serif and it may or may not be patterned.
7.5.1 - (not applicable)
7.5.2 - Serif
With serifs.

7.6.0 - Stencil subclass
Its appearance is as though it was produced by a stencil.
7.6.1 - Sans serif
Without serifs.

7.7.0 - Reversed subclass
The designs are characterized by having a white image on a black background.
7.7.1 - Sans serif
Without serifs.

7.8.0 - Engraved subclass
The stems of the letters have a hatching or shading.
7.8.1 - Sans serif
Without serifs.
7.9.2 - Serif
With serifs.

Figure A.145 — INVITATION SHADED

7.9.0 - Miscellaneous subclass
All designs which cannot be placed in one of the previous ornamental groupings are put here; it is a catch-all group.

7.9.1 - Sans serif
Without serifs.

8.0.0 - Symbols and Ornaments class
(reserved for future assignment)