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**Information technology — Font information  
interchange —**

Part 1:  
**Architecture**

**AMENDMENT 1: Typeface design grouping**

*Technologies de l'information — Échange d'informations sur les fontes —*

*Partie 1: Architecture*

*AMENDEMENT 1: Groupage de conceptions de caractères*

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## Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this Amendment may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

Amendment 1 to International Standard ISO/IEC 9541-1:1991 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 34, *Document description and processing languages*.

## Introduction

The Annex A of ISO/IEC 9541-1:1991 should be replaced with the revised Annex A specified by this amendment. The Annex A is normative and defines a typeface design grouping scheme to provide values for the mandatory DESIGNGROUP property in clause 8.6.15.

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# Information technology — Font information interchange —

## Part 1: Architecture

### AMENDMENT 1: Typeface design grouping

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#### Annex A

Replace Annex A of ISO/IEC 9541-1:1991 with the following annex:

#### Annex A (normative)

#### Type design grouping<sup>2)</sup>

This annex defines a typeface design grouping scheme whose purpose is to provide values for the mandatory DSNGROUP property defined in clause 8.6.15. This grouping scheme consists of a three-level hierarchical structure. 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. Typeface examples for each Specific Group are shown and named wherever possible. These illustrations are intended to serve only as informative examples, not as a comprehensive catalog.

Typefaces which are similar in appearance or which have characteristics that would allow them to be reasonably substituted for each other, are grouped together.

Some type designs could be associated with more than one design group, but it is the responsibility of the type designer or font resource generator to choose the most appropriate group.

This typeface grouping scheme has the following intended purposes:

- To aid both people and software applications in initial selection of typefaces, either in their system or on remote font servers, which closely resemble a specified style which is not available.
- To provide information that will enable identification of fonts for different international scripts (such as Kanji and Latin) that will harmonize well when used on a page of a multi-script document (assuming the weights are matched). Assignment of suitable representations of different scripts to existing classes is encouraged to support this purpose.
- To help software applications do font substitution, based on style characteristics, when a font referenced in a document is not available on a user's system. Font substitution based on style alone can cause a document to be reformatted since the metrics are likely to be different. However, this may be adequate for some applications. The classification information contained in this document can also be useful for systems capable of more advanced forms of substitution.

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When using this grouping scheme, it may be necessary to consider properties additional to those described in clause 8 when selecting substitution fonts. Since the grouping value specifies only the style and appearance of a font, additional properties such as NOMCAPSTEMWIDTH, LCHEIGHT, and metrics can prove useful in matching the layout and typographic color of a page, and in achieving the best overall match.

**NOTE 42** Throughout this grouping scheme, the term "serif" is used to denote both the traditional concept of the serifs of Roman typefaces, as well as any style of non-plain stroke-ending used in a non-Latin typeface. Although non-Latin typefaces with non-plain stem endings are included in groups with "serif" in their names, it may generally be improper to refer to them as "serif" typefaces. The term "sans serif" is used to denote a plain, unembellished stroke ending.

### 1.0.0 Uncials class

Typefaces in this class use as a source of their design the Uncial writing hands of Europe used from the 4th to the 10th Century.

#### 1.1.0 Uncials::Single alphabet subclass

These designs are characterized by having one set of alphabetic glyphs having a mixture of both upper and lowercase letter shapes consistent with the historical Uncial book hand.

##### 1.1.1 Uncials::Single alphabet::Sans Serif

Typefaces in this group have the characteristics of Uncial glyph images, but have plain stem endings.



Figure A.1 displays the lowercase letters 'a', 'c', 'e', 'g', 'm', 'o', 'r', and 't' in the Amsterdam SIMPLEX font style. The letters are rendered in a clean, sans-serif font with a slightly irregular, hand-drawn appearance.

Figure A.1 — Amsterdam SIMPLEX

##### 1.1.2 Uncials::Single alphabet::Serif

Typefaces in this group have the characteristics of Uncial, and have the serifs that were typical of the historical forms.



Figure A.2 displays the lowercase letters 'a', 'c', 'e', 'g', 'm', 'o', 'r', 't', 'y', 's', and 'a' in the Amsterdam LIBRA font style. The letters are rendered in a serif font with a slightly irregular, hand-drawn appearance.

Figure A.2 — Amsterdam LIBRA

#### 1.2.0 Uncials::Duplex alphabet subclass

The designs of this subclass are characterized primarily by having distinct and separate upper and lowercase letter shapes (a characteristic not found in historical examples).

##### 1.2.1 Uncials::Duplex alphabet::Sans Serif

Typefaces in this group have duplex Uncial forms with plain stem endings.

No Sample Available

Figure A.3 — (—)

##### 1.2.2 Uncials::Duplex alphabet::Serif

Typefaces in this group have duplex Uncial forms with serifs for stem endings.



Figure A.4 displays the uppercase letters 'M', 'O', 'R' and lowercase letters 's', 'p', 'a', 'b', 'e', 'f' in the Klingspor AMERICAN UNCIAL font style. The letters are rendered in a serif font with a slightly irregular, hand-drawn appearance.

Figure A.4 — Klingspor AMERICAN UNCIAL

## 2.0.0 Inscriptionals class

Latin typefaces of this general class have the characteristics of being based on monumental lettering which was cut in stone. Generally they include only uppercase letters and are based on the proportions of the classic Roman inscriptional glyph images, e.g., having a narrow "E", "F", and "L".

### 2.1.0 Inscriptionals::Solids subclass

These designs have solid stems.

#### 2.1.1 Inscriptionals::Solids::Sans Serif

Typefaces in this group are based on inscriptional styles, have solid stems, and plain stem endings.



Figure A.5 — Adobe LITHOS

#### 2.1.2 Inscriptionals::Solids::Serif

Typefaces in this group are based on inscriptional styles, have solid stems, and non-plain stem endings.



Figure A.6 — Stempel SISTINA

### 2.2.0 Inscriptionals::Inlines subclass

These designs have a fine line in the stem which gives the appearance that the lettering is incised in stone or wood.

#### 2.2.1 Inscriptionals::Inlines::Sans Serif

Inscriptional style typefaces with inlines and plain stem endings.

No Sample Available  
Figure A.7 — (—)

#### 2.2.2 Inscriptionals::Inlines::Serif

Inscriptional style typefaces with inlines and nonplain stem endings.



Figure A.8 — AUGUSTEA INLINE Nebiolo

### 2.3.0 Inscriptionals::Outlines subclass

The designs of this subclass are characterized by single lines that define the contour or outline of the glyphs.

#### 2.3.1 Inscriptionals::Outlines::Sans Serif

This group consists of outlined inscriptional styles with plain stem endings.

No Sample Available  
Figure A.9 — (—)

### 2.3.2 Inscriptionals::Outlines::Serif

This group consists of outlined inscriptional styles with non-plain stem endings.



Figure A.10 — Bauer COLUMNA

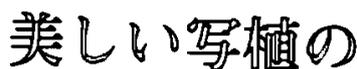


Figure A.11 — Morisawa LINEA

### 3.0.0 Blackletters class

Designs in this class are characterized by relatively bold, angular, and condensed character shapes. Latin typefaces in this class are generally based on the late medieval European book hands known as the Blackletter style. Some variations include bold rounded styles as well as less formal designs showing cursive influences. Non-Latin typefaces in this class are those based on bold and angular designs.

#### 3.1.0 Blackletters::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. Latin-alphabet versions of these typefaces were, historically, reserved for Bible printing, and were based on the ecclesiastical writing style.

#### 3.1.1 Blackletters::Formal style::Sans serif

This group consists of formal Blackletter designs with plain stem endings.



Figure A.12 — ITC HONDA

#### 3.1.2 Blackletters::Formal style::Serif

This group consists of formal Blackletter designs with serifs for stem endings.



Figure A.13 — Lanston Monotype GOUDY TEXT



Figure A.14 — Ryobi MIYABI



Figure A.15 — Cimos, KUFİ Script

**3.1.3 Blackletters::Formal style::Sans serif, engraved**

The designs of this specific group have plain stem endings and have a pattern of hatching or shading in the stems.

No Sample Available  
Figure A.16 — (—)

**3.1.4 Blackletters::Formal style::Serif, engraved**

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

Figure A.17 — Klingspor DEUTSCHE ZIERSCHRIFT

**3.1.5 Blackletters::Formal style::Simplified, with concave stem endings**

Typefaces in this group have concave stem endings, long ascenders, and short descenders.

Figure A.18 — Letraset KUFIC MEDIUM

**3.1.6 Blackletters::Formal style::Simplified, concave stem endings with two character twist**

Arabic typefaces in this group have concave stem endings, long ascenders, short descenders, and two character twist.

Figure A.19 — Cimos MUSTASIMI

**3.1.7 Blackletters::Formal style::Modified, with concave stem endings**

Typefaces in this group have concave stem endings, long ascenders, short descenders, and modified lines (especially the base line).

Figure A.20 — Letraset ROYAL KUFI

**3.1.8 Blackletters::Formal style::Simplified, with "Fish Tail" stem endings**

Typefaces in this group have "Fish Tail" stem endings, long ascenders, and short descenders.

Figure A.21 — Compugraphic KUFI

**3.1.9 Blackletters::Formal style::Modified, with "Fish Tail" stem endings**

Typefaces in this group have "Fish Tail" stem endings, long ascenders, short descenders, and modified lines (especially the base line).



**3.1.10 Blackletters::Formal style::One character twist, with "Fish Tail" stem endings**

Typefaces in this group have "Fish Tail" stem endings, long ascenders, and one character twist.



**3.1.11 Blackletters::Formal style::Display, old style black**

Typefaces in this group have "Fish Tail" stem endings, a bold weight, and short ascenders and descenders in addition to their classic appearance.



**3.1.12 Blackletters::Formal style::Display, modern style black**

Typefaces in this group have concave stem endings, and represent a modern version of designs classified under 3.1.11.



**3.2.0 Blackletters::Round style subclass**

The designs of this subclass have characteristics of the Blackletters class but are less angular.

**3.2.1 Blackletters::Round style::Sans serif**

The designs of this specific group have plain stem endings.



**3.2.2 Blackletters::Round style::Serif**

The designs of this specific group have non-plain stem endings.



**3.2.3 Blackletters::Round style::Sans serif, engraved**

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



**3.2.4 Blackletters::Round style::Serif, engraved**

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

No Sample Available  
Figure A.29 — (—)

**3.3.0 Blackletters::Hybrid style subclass**

The designs of this subclass are characterized by their mixture of both Blackletters Formal style (3.1.0) and the Serifs style (4.1.1). The historical models for this design are from the late 1400's (Subiaco Monastery; Da Spira Brothers).

**3.3.1 Blackletters::Hybrid style::Sans serif**

The designs of this specific group have plain stem endings.

**MORTY Spabefg**

Figure A.30 — Klingspor WALLAU

**3.3.2 Blackletters::Hybrid style::Serif**

The designs of this specific group have non-plain stem endings.

**GMORT Spabefgo**

Figure A.31 — Stephenson Blake BOLOGNA

**3.3.3 Blackletters::Hybrid style::Sans serif, engraved**

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

No Sample Available  
Figure A.32 — (—)

**3.3.4 Blackletters::Hybrid style::Serif, engraved**

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

No Sample Available  
Figure A.33 — (—)

**3.4.0 Blackletters::Informal style subclass**

The designs of this subclass are generally based on medieval European Gothic cursive book hands.

**3.4.1 Blackletters::Informal style::Sans serif**

Typefaces in this group have characteristics of an informal Blackletters style, but have plain stem endings.

No Sample Available  
Figure A.34 — (—)

**3.4.2 Blackletters::Informal style::Serif**

Designs in this group have cursive Blackletter characteristics and serifs.

Figure A.35 — Bauer LEGEND

Figure A.36 — Cimos SUNBULY

### 3.4.3 Blackletters::Informal style::Sans serif, engraved

The designs of this specific group have plain stem endings and a pattern of hatching or shading in the stems.

No Sample Available  
Figure A.37 — (—)

### 3.4.4 Blackletters::Informal style::Serif, engraved

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

No Sample Available  
Figure A.38 — (—)

### 3.4.5 Blackletters::Informal style::Unjoined

Designs in this group have a light (additional white space) appearance, with unjoined glyphs.

Figure A.39 — Compugraphic ARABIC MATH

## 4.0.0 Serif class

Typefaces in this class have stems with non-plain stem endings and are ones which are not associated with the other classes. Latin typefaces in this group have the traditional serifs; non-Latin typefaces may have any variety of functional or decorative stem endings.

**NOTE 43** Although non-Latin typefaces in this class are grouped here because of their non-plain stem endings, it may generally be improper to refer them as being "serif" typefaces.

### 4.1.0 Serifs::Oldstyle subclass

The typefaces in this category show characteristics of the typefaces created in Europe between the late 15th Century and the 17th Century.

#### 4.1.1 Serifs::Oldstyle::Venetian

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

Figure A.40 — Ludlow EUSEBIUS

#### 4.1.2 Serifs::Oldstyle::Garalde

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 uppercase, and a horizontal bar on the lowercase "e".

RTY Spabefgo

Figure A.41 — Monotype GARAMOND

#### 4.1.3 Serifs::Oldstyle::Dutch / English

Latin-alphabet typefaces in this category (based on 17th to 18th century Dutch designs) 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".

tgmbaAG

Figure A.42 — Stempel JANSON

#### 4.2.0 Serifs::Transitional subclass

Typefaces in this group have characteristics of the typefaces that followed after W. Caslon (circa 1720) and before G. Bodoni (circa 1800).

#### 4.2.1 Serifs::Transitional::Direct Line

Typefaces in this category are characterized by fine serifs and noticeable contrast in the weight of the thick and thin strokes. 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).

MORTY Spabefgo

Figure A.43 — BASKERVILLE

#### 4.2.2 Serifs::Transitional::Modified

These typefaces, 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.

Em todo o de

Figure A.44 — Linotype GOUDY OLD STYLE

العلم نور وهدى

Figure A.45 — Cimos THULUTH

#### 4.2.3 Serifs::Transitional::Arabic Modified II

Arabic typefaces in this group have long ascenders and descenders, more cursive characteristics, and light strokes.



MORTY Spabefgo

Figure A.53 — Monotype PERPETUA

#### 4.4.2 Serifs::Contemporary::Fine serif

The serifs of typefaces in this group are very small and pointed and have small bracketing.

ABCDE abcdefg

Figure A.54 — ITC QUORUM

愛のある

Figure A.55 — Sha-ken KASOGO

#### 4.4.3 Serifs::Contemporary::Lettering

Typefaces in this group are based on the lettering styles of American sign painters of the early 20th Century.

BCDEFcdefgh

Figure A.56 — UNIVERSITY

#### 4.5.0 Serifs::Legibility subclass

Obvious characteristics of Latin-alphabet typefaces of this group are large x-height, short ascenders and descenders. The general characteristics are that they were designed for applications where legibility is a major consideration. They may be based on a variety of historical designs.

##### 4.5.1 Serifs::Legibility::Rounded (traditional)

These designs were originally intended to be used for newspapers and were mostly based on previous typeface models. Some designs, however, were not based on historical models, but were developed to address specific technical printing problems. In Latin-alphabet typefaces of this group, the rounded letters such as "c", "e", "o" are based on traditional rounded forms.

MOR Spabefgo

Figure A.57 — Monotype TIMES ROMAN

χρησίμων

Figure A.58 — Greek: Monotype TIMES ROMAN

愛のある

Figure A.59 — Sha-ken SHINBUN TOKUFUTO MINCHO

ان خدمات سبكتروم

Figure A.60 — Lotus

#### 4.5.2 Serifs::Legibility::Super-elliptical (square)

The traditionally rounded parts of the glyphs in this group are based on a super-elliptical (squared-off ellipse) design.

**MORTY Spabefgo**

Figure A.61 — Stempel MELIOR

#### 4.6.0 Serifs::Square serif subclass

The serifs are relatively heavy and may or may not be bracketed.

#### 4.6.1 Serifs::Square serif::Monotone

The designs of this group are characterized by serifs that are approximately the same weight (thickness) as the stems, with no fillets or brackets connecting the stems and serifs.

**MORT Spabefgo**

Figure A.62 — ATF STYMIE

#### 4.6.2 Serifs::Square serif::Clarendon

The designs of this specific group are characterized by serifs that are much heavier than traditional serifs, but less than the weight of the stems. The serifs have brackets connecting to the stems.

**MO Spabefg**

Figure A.63 — Bauer FORTUNE

#### 4.6.3 Serifs::Square serif::French Clarendon

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

**MOR Spabefgom**

Figure A.64 — ATF P. T. BARNUM

#### 4.6.4 Serifs::Square serif::Short (stub) Serifs

The distinguishing features of this group are small, stubby serifs and relatively bold stems.

**GMORT Spabefg**

Figure A.65 — ATF CHELTENHAM

**4.6.5 Serifs::Square serif::Typewriter**

Typefaces in this group consist of designs that were originally intended for typewriters or were based on monospaced typewriter styles.

ORT Spabefg

Figure A.66 — ATF BULLETIN TYPEWRITER

**4.6.6 Serifs::Square serif::Dot matrix**

The typefaces in this group are based on the glyphs produced by a dot matrix output device.

No Sample Available

Figure A.67 — (—)

**4.7.0 Serifs::Latin subclass**

These designs are characterized by serifs that have angled fillets, giving the appearance of triangular shaded serifs.

**4.7.1 Serifs::Latin::Solid**

The stems of the typefaces in this group are solid.

M Spabefg

Figure A.68 — WIDE LATIN

**4.7.2 Serifs::Latin::Inline**

The stems of the typefaces in this group have an interior line which evokes the look of lettering incised in stone or wood.

Spabefg

Figure A.69 — Stephenson Blake CHISEL

**4.8.0 Serifs::Engraving subclass**

Latin-typefaces in this group are based upon the designs of the copper-plate engravers.

**4.8.1 Serifs::Engraving::Barbed serif**

Typefaces in this group have bifurcated or barbed serifs.

ORT Spabefgomty

Figure A.70 — NICHOLAS COCHIN

العلم نور و هدى

Figure A.71 — Cimos SOUFI

#### 4.8.2 Serifs::Engraving::Straight serif (fine)

The main characteristic of this group is very small and pointed serifs, with small fillets. In alphabetic typefaces in this group, the letters are generally all uppercase.

MORTY SA W

Figure A.72 — ATF COPPERPLATE GOTHIC

اننقال كلمه بمنظور هدف

Figure A.73 — HILYAH SOLID

#### 4.9.0 Serifs::Free Form subclass

The typefaces in this group have ornaments and styling derived from, or influenced by the Art Nouveau movement of the late 1800's and the early 1900's. They are often characterized by irregular organic forms, twining fronds, sinuous curves, etc.

#### 4.9.1 Serifs::Free Form::Solid

The stems of typefaces in this group are solid.

art·hei

Figure A.74 — Weisert ARNOLD BOCKLIN

إن الصحيفة

Figure A.75 — ASRI HEADLINE

#### 4.9.2 Serifs::Free Form::Outline

The typefaces in this group have ornaments and styling derived from Art Nouveau styles; the shapes are outlined by contour lines of a uniform weight.

Bivouac

Figure A.76 — ATF ERRATIC OUTLINE

#### 4.10.0 Serifs::Computer subclass

The primary characteristics of these faces are that they give the appearance of faces associated with computer character recognition styles or LED displays.

#### 4.10.1 Serifs::Computer::OCR

The typefaces in this group are based on designs created to be machine readable.

No Sample Available

Figure A.77 — (—)

**4.10.2 Serifs::Computer::Digital**

Characters are segmented and composed of straight lines, such as those in LED displays.

No Sample Available  
Figure A.78 — (—)

**4.11.0 Serifs::Miscellaneous subclass**

Any typeface that has serifs and does not fit into any of the previous categories may be in this group.

En cada

Figure A.79 — ATF CASLON ANTIQUE

**4.12.0 Serifs::Mincho subclass**

These typefaces have 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 Serifs::Mincho::Old Style**

The features of the stem endings of these typefaces are relatively smooth and rounded. The size difference between the Kana and Kanji is larger than the difference in New Style (4.12.2). The counters are relatively small.

愛のある

Figure A.80 — Sha-ken SHUEI MINCHO

**4.12.2 Serifs::Mincho::New Style**

The features of the stem endings are relatively sharp and angular. The size of the Kana is smaller than that of the Kanji, but less so than in the Old Style (4.12.1). The counters are relatively large.

愛のある

Figure A.81 — Sha-ken HONRAN MINCHO B

**4.12.3 Serifs::Mincho::Old Style::Miscellaneous**

This class is for any Mincho typeface that does not fall into the New Style or Old Style group.

写植の書体

Figure A.82 — Ryobi NAU MB

**5.0.0 Sans serifs class**

Typefaces in this class have plain stem endings, and are not in the Uncials, Inscriptionals, Blackletters, or Ornamentals classes.

**5.1.0 Sans serifs::Gothic subclass**

This subclass contains designs based on the earliest of the Latin-alphabet sans serif printing typefaces (circa 1815).

### 5.1.1 Sans serifs::Gothic::Grotesque

The Latin-alphabet designs of this group are based on the early sans serif designs, and are characterized by a two story lowercase "a"; and may have a spur serif on the uppercase "G".

**GMOR Spaesg**

Figure A.83 — ATF FRANKLIN GOTHIC

**För alla nya st**

Figure A.84 — Monotype GILL SANS

χρησίμων  
ΖΗΘΙΚΑ

Figure A.85 — Greek:Monotype GILL SANS

### 5.1.2 Sans serifs::Gothic::Neo-grotesque

The Latin-alphabet designs of this specific group are based on early sans serif designs, but have been modernized. They are characterized by having a two story lowercase "a" and a one story lowercase "g"; and may have a spur serif on the uppercase "G".

**EGMORT arbesg**

Figure A.86 — Linotype-Hell HELVETICA

愛のある

Figure A.87 — Sha-ken ISHII FUTO GOTHIC

أبلايد أراييك

Figure A.88 — ITC LATIF

### 5.1.3 Sans serifs::Gothic::Typewriter

Typefaces in this group are based on the monospaced designs used for typewriters.

**GMORTY Spabefg**

Figure A.89 — LETTER GOTHIC

### 5.2.0 Sans serifs::Humanist subclass

Sans serif typefaces based on or inspired by classical Roman proportions for uppercase, and the less geometric quality of lowercase Humanist book hands.

#### 5.2.1 Sans serifs::Humanist::Classical

Characteristics of Latin-alphabet typefaces in this group include stems with subtle stress variation, uppercase letters with classic Roman Inscriptional proportions and a two story lowercase "a".

**MORTY Sparbesg**

Figure A.90 — Linotype-Hell OPTIMA

أَيْلَايد

Figure A.91 — ITC BOUTROS MODERN KUFİ

#### 5.2.2 Sans serifs::Humanist::Non-classical

Latin-alphabet typefaces in this group have distinct contrast between thick and thin strokes; a two story lowercase "a"; may or may not have the uppercase in the classic Roman Inscriptional proportions.

**OR Sparbes**

Figure A.92 — Stephenson Blake BRITANNIC

الكلمات تنقل الإنكار

Figure A.93 — MODERNASKH

#### 5.2.3 Sans serifs::Humanist::Typewriter

This group includes typefaces based on the monospaced designs used for typewriters.

No Sample Available

Figure A.94 — (—)

### 5.3.0 Sans serifs::Stress variation subclass

These typeface designs have a noticeable variation in the stem thickness.

#### 5.3.1 Sans serifs::Stress variation::Broad Pen

Type designs based on the characteristic style of broad-edge pen lettering.

**MORTY Sparbes**

Figure A.95 — ATF LYDIAN

أبلايد أرابيك

Figure A.96 — ITC BOUTROS CALLIGRAPHY

क्ष ज च क्र

Figure A.97 — Devanagari Typestyle

### 5.3.2 Sans serifs::Stress variation::Casual

Informal designs which do not adhere to classical proportions.

MORT parbesg

Figure A.98 — ATF ADLIB

الكلبات تنقرا

Figure A.99 — KABIR

### 5.3.3 Sans serifs::Stress variation::Typewriter

Typefaces in this group are based on the sans serif designs used for typewriters.

No Sample Available

Figure A.100 — (—)

### 5.3.4 Sans serifs::Stress variation::Broad pen, curved horizontal strokes

Arabic typefaces in this group have more curvature in the lower side of the horizontal strokes.

ان خدمات سبكتروم العدا

Figure A.101 — QADI

### 5.3.5 Sans serifs::Stress variation::Broad pen, angled horizontal strokes

In Arabic typefaces in this specific group, some horizontal strokes are slightly angled below the baseline, a characteristic which adds aesthetic value to the script.

العلم نور و هدى

Figure A.102 — Cimos YAKOUB

### 5.4.0 Sans serifs::Art Deco subclass

Designs in this subclass are based on the display typeface designs of the 1920's.

#### 5.4.1 Sans serifs::Art Deco::Standard

Extreme contrast, one stem is very bold, arms and bowls are very thin.

**OR Sparbes**

Figure A.103 — ATF BROADWAY

愛のある

Figure A.104 — Sha-ken MIN-CURL

لثبثبج

Figure A.105 — Letraset HADD

#### 5.4.2 Sans serifs::Art Deco::Modified

Lines or patterns have been added to the stems of glyphs in this group.

**CEGMOR**

Figure A.106 — Barnhard Bros. & Spindler BOULMICH

#### 5.4.3 Sans serifs::Art Deco::Thin Line

The stems of typefaces in this group consist of very thin strokes.

MOSparbesgomty

Figure A.107 — ATF BERNHARD FASHION

あいうえお

Figure A.108 — Ryobi PICO CASUAL

لثبثبج

Figure A.109 — Letraset ANTI

#### 5.4.4 (removed; do not use)

#### 5.4.5 Sans serifs::Art Deco::Italic

Typefaces in this group have the visual characteristics of the sub-class and have a slant.

لثبثبج

Figure A.110 — Letraset NASIM MEDIUM

5.4.6 Sans serifs::Art Deco::Outline

Typefaces in this group have the visual characteristics of the class and subclass, but are outlined with a thin line rather than having solid stems.



Figure A.111 — MUFARAGH

5.4.7 Sans serifs::Art Deco::Extra distorted, with some stress variation

Typefaces in this group have the visual characteristics of the subclass, but have stylistic distortions of the glyph images.



Figure A.112 — Letraset SALIM

5.4.8 Sans serifs::Art Deco::Miscellaneous

Typefaces in this specific group have the characteristics of the class and subclass, but do not fit into any of the previous specific groups.



Figure A.113 — SCARAB 76

5.5.0 Sans serifs::Geometric subclass

The designs of typefaces in this group are based on geometric shapes, and are generally monotone.

5.5.1 Sans serifs::Geometric::Round, flat stem endings

Designs in this group have a monotone design, the round glyphs are based on a circle, and stem endings are flat. In some instances, the ascenders may be longer than the descenders.



Figure A.114 — Bauer FUTURA



Figure A.115 — Burmese Typestyle



Figure A.116 — NEO-KUFI



Figure A.117 — Thai Typestyle

### 5.5.2 Sans serifs::Geometric::Round, Rounded stem endings

Designs in this group have a monotone design and rounded stem endings. In some instances the ascenders may be longer than the descenders.

**ABCDEF no**

Figure A.118 — VAG ROUNDSCHRIFT

愛のあるる

Figure A.119 — Sha-ken NARD

آبثبثبث

Figure A.120 — Letraset DANIEL

### 5.5.3 Sans serifs::Geometric::Super-elliptical

In Latin-alphabet designs in this group, the shape of all traditionally rounded letters, such as "o", "c", and "e" are based on the super-ellipse (a squared off ellipse).

**MO Sparbe**

Figure A.121 — Nebioli EUROSTILE

الصحيفة المطبوعة

Figure A.122 — ZARAFa

### 5.5.4 Sans serifs::Geometric::Stylized

Designs in this group have a monotone design, but are less formal, may have curves in the stems, and do not appear as structured.

**RTY Sparbesg**

Figure A.123 — ATF HOBO

大廉売総棚

Figure A.124 — Ryobi MAGIC

إن فت الطباعة هو الذي يحدد

Figure A.125 — Compugraphic LAKHDAR

**5.5.5 Sans serifs::Geometric::Typewriter**

The typefaces in this group are sans serif, have a geometric appearance, and are based on the monospaced designs used for typewriters.

No Sample Available  
Figure A.126 — ( — )

**5.5.6 Sans serifs::Geometric::Monotone**

Typefaces in this group have heavy near-monotone stems.

إن الصحيفة المطبو

Figure A.127 — ARABETICA GARDE

**5.5.7 Sans serifs::Geometric::With stress variation**

Typefaces in this group have very heavy stems with some variation between the thick and thin stems.

الكلمات تنقل الافكا

Figure A.128 — ZAITUN

**5.5.8 Sans serifs::Geometric::With extra stress variation**

Typefaces in this group have very heavy stems with significant variation between the thick and thin strokes.

الكلمات تنقل الاف

Figure A.129 — SHARJAH

**5.5.9 Sans serifs::Geometric::Round, pointed stem endings**

Typefaces in this group have more rounded shapes with pointed stem endings.

الكلمات تنقل الافكا

Figure A.130 — ARABETICA GARDE II

**5.5.10 Sans serifs::Geometric::Square**

Typefaces in this group represent sans serif geometric designs which have an extra light (additional white space) appearance.

الكلمات تنقل الافكار

Figure A.131 — MOZAIQUE



**5.6.4 Sans serifs::Computer::Modern OCR**

Typefaces in this group are lighter, having straight lines against curves.



Figure A.139 — Letraset BAHARNA

**5.7.0 Sans serifs::Free From subclass**

The typefaces in this subclass have ornaments and styling derived from, or influenced by the Art Nouveau movement of the late 1800's and the early 1900's. They are characterized by having more sinuous curves and less formality than those in related subclasses.

**5.7.1 Sans serifs::Free Form::Solid**

Based on Art Nouveau designs, typefaces in this group have solid stems.



Figure A.140 — Deberny & Peignot AURIOL

**5.7.2 Sans serifs::Free Form::Outline**

The typefaces in this group have shapes which are outlined by contour lines of a uniform weight.

No Sample Available  
Figure A.141 — ( — )

**5.8.0 Sans serifs::Miscellaneous subclass**

Any typeface that is a sans serif and does not fit into any of the previous categories.

**6.0.0 Script class**

These typefaces are designed to resemble handwriting.

**6.1.0 Scripts::Jointed subclass**

Typefaces in this subgroup have glyphs with joining strokes so they appear connected.

**6.1.1 Scripts::Jointed::Formal**

Typefaces in this group are based on a writing style characterized by extreme contrast between the thick and thin strokes.



Figure A.142 — ATF COMMERCIAL SCRIPT



Figure A.143 — Cimos DIWANI SCRIPT

**6.1.2 Scripts::Jointed::Informal**

A script with informal, cursive characteristics with thick and thin contrast.

Figure A.144 — Olive MISTRAL

Figure A.145 — Ryobi YUKINARI E

Figure A.146 — Cimos RUK'AH

**6.1.3 Scripts::Jointed::Monotone**

Designs in this group have strokes of uniform thickness.

Figure A.147 — ATF KAUFMANN

**6.1.4 Scripts::Jointed::Miscellaneous**

Typefaces in this specific group have the characteristics of the class and subclass, but do not fit into any of the previous specific groups.

Figure A.148 — QAWIY

**6.2.0 Scripts::Unjointed subclass**

Typefaces in this subclass have spaces between adjacent glyphs, making it a less cursive style.

**6.2.1 Scripts::Unjointed::Formal**

Designs in this group are based on a writing style that is characterized by extreme contrast between the thick and thin parts of the glyphs.

Figure A.149 — Stempel VIRTUOSA

**6.2.2 Scripts::Unjointed::Informal**

Typefaces in this group are based on rapidly written scripts having significant contrast.

*Mordich al*

Figure A.150 — Monotype PEPITA

آبث بثبثبج جخبج

Figure A.151 — Letraset BOUTROS BOLD

### 6.2.3 Scripts::Unjointed::Monotone

Designs in this group have strokes of uniform thickness.

*Mordich al Saf*

Figure A.152 — Bauer GILLES GOTHIC

الانسان با صفر

Figure A.153 — MODERN KUFII

### 6.2.4 Scripts::Unjointed::Brush

Typefaces in this group are based on brush drawn lettering.

*Mordich al Sa*

Figure A.154 — Klingspor SALTINO

大廉壳総棚

Figure A.155 — Ryobi NOMURA KANTEI

الانسان بأصغريه قلبه

Figure A.156 — Cimos MODERN NASKHI SCRIPT

### 6.2.5 Scripts::Unjointed::Cursive

Typefaces of this group are characterized by having the appearance of handwriting, but are unjoined.

*Mordich al Safe*

Figure A.157 — ATF MURRAY HILL

### 6.2.6 Scripts::Unjointed::Calligraphic

Designs in this group are based on the characteristics of lettering done with a broad-edge pen.

*Mordich al Safengo*

Figure A.158 — ATF THOMPSON QUILLSCRIPT