Type Designers & Typefoundries

There are few well-known type designers and typefoundries working with Arabic type today. Some refuse to be listed or have their work displayed for fear of piracy, and others for fear of being discovered selling and marketing illegally copied fonts. What follows is by no means an all-inclusive listing; it is a selection of some of the most active players in the field. It presents a range of international individual type designers alongside small and large typefoundries, from seven different Eastern and Western nations. Their work displays the range of Arabic fonts available on the market and portrays the latest trends in Arabic type design today.

Directory

Agfi Monotype
515 Basic Road
El Segundo, CA 90245
USA

Livetype Library GmbH
Doppler Strasse
D-5942 Oelde, Germany
www.livetypelibrary.com

Algfi Monotype
Pennwood Business Park
Stafford, BI 328
Surrey, UK
www.agfiemonotype.com

Renaissance
4739 Balsam Road, Suite 1
19031, Delaware
www.renaistype.com

DecoType
RID 540, 2564
1010 Amsterdam
The Netherlands
www.decotype.com

Soloth, Morocco
SoltatDesign
131019897251
Brookfield, WI 53002
www.soltat.com

Holmes, Kith
Righam & Richten
4337079999
www.holmesletters.com
Tel: 1-602-260-8799

Hamed, Ahmad
Syntar Design
ahmed@syntar-design.com
www.syntar-design.com

Altaf, Sabri
Alastor Design
alastor@alastor.com
www.alastor.com
1. Ahmad Humeid
Ahmad Humeid is the co-founder and CEO of Syntax Digital. Starting his own design studio while still studying architecture at the University of Jordan, he was involved in numerous publishing, design and technology ventures in the Middle East. Before founding Syntax Digital he was Creative Director at a number of magazines including BZT Middle East and Popular Science Middle East. He was also a founding member of Arabia On Line, the first large internet on-line service in the region. His involvement over the years in projects at the intersection of design, publishing and technology, has led to Mr Humeid’s interest in typography, type design and information architecture.

1.8. The Ahmad font
Ahmad Humeid developed his Arabic font Ahmad over a period of three years. Originally designed for use in his personal design projects, it developed in 1996, into a complete character set in three weights for usage in BZT Middle East magazine. The font’s design responded to the need for a geometric modern Arabic typeface that is legible, compact and conveys a contemporary design style. After BZT Middle East closed down, the typeface spread among designers and publishing houses in the Middle East—it was copied and distributed but never officially sold. The Ahmad font became a trendy Arabic typeface, used for a wide range of design applications, from packaging, to print, to signs.
2. ParaType

ParaType, digital typefoundry, the former font department of ParaGraph International Inc., was founded in 1991. Its type library supports over 100 languages including Arabic, Cyrillic, European and practically all the languages of the former USSR. All fonts in the library exist in digital form, and have been carefully tested to ensure compatibility with practically any modern computer systems and virtually every significant text editing, publishing, and image processing software package. ParaType fonts are available in various digital formats for various platforms: PostScript and TrueType for Windows, Macintosh and Unix and in various encodings.

ParaType considers its mission to catalyze the formation of visual culture in modern Russia. Not only does ParaType provide its own typefaces, but also the best fonts developed by foreign and local typefoundries. Its collection of Arabic fonts is designed by the Russian design legend and unique expert and authority on Oriental scripts, Ms. Lyubov Alexeyevna Kuznetsova.

لامبمات القرآن إلا أن يتحلى بألوانه بالوانه امام الكتابة تزحف من اليمن الى النور على جبال النقوش على توازيق العماد حيث يخط القلم على اليابض حرفا فاحما اسودا شبها بكوبرية فرسان

2.2. Arabic typefaces


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2.3. Lyubov Alexeyevna Kuznetsova

Ms. Lyubov Alexeyevna Kuznetsova graduated from the Moscow Printing Institute. She has worked as a type, graphic, and book designer and calligrapher for about 50 years in a number of Russian type design organisations and publishing houses. Since 1992, she has been a staff type designer at Paratype, Inc. She has led for many years projects on Arabic typography. She is the author of a number of Arabic as well as Cyrillic typefaces. Some of the Arabic typefaces she developed in cooperation with calligraphers from Egypt, Lebanon and Iran—such as the Persian calligraphers Azarbad and Zarrin Hatl. Her pet project is a typeface in the traditional Persian Nasta’aliq style, whose features present a true challenge to modern typesetting technology.

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3. Habib Khoury

Habib Khoury was born in Fassoutsa, Upper Galilee, in 1967. At the age of 12, he started his first Arabic calligraphy course. After high school, and encouraged to develop his talent further into a professional career, he pursued a college education in graphic design and illustration. He did his graduate studies at the Central St. Martin’s School of Design in London—where he graduated with distinction. He spent a number of years in Haifa, Tel Aviv, London, and New York, working on a myriad of projects that ranged from advertising, publication and web design, for various publishing houses, advertising agencies and cultural institutions. He has a number of local and international awards to his name. He is presently Executive Creative Director of Avant Design Communications, which specialises in trilingual typography and visual communication.

3.1. Avantype Foundry

Habib Khoury’s special interest in calligraphy from an early age and his expertise in Arabic, English and Hebrew calligraphy and typography has drawn him slowly into the realm of type design. He established his own private foundry ‘Avantype’ in 1998, beginning with the digitisation of the fonts he had been drawing by hand for a decade. Avantype Foundry is unique in providing a range of compatible Latin, Arabic and Hebrew typefaces, in addition to many custom-designed fonts.
4. Agfa Monotype

Monotype has built its reputation for producing high quality fonts and typesetting machines over a long period of more than 100 years of remarkable typographic inventions. The company was founded in 1807 after the invention of the Monotype Typesetter by Tolbert Lanston. The Monotype keyboard and hot-metal typesetter, offered contemporary typographers a flexible typesetting process that allowed for refined typographic subtleties. This feature proved to be particularly beneficial for setting Arabic type. Throughout its long prestigious typographic history, Monotype has worked with a number of famous typographers from different nationalities, in addition to its highly skilled in-house designers and draftsmen, producing a rich library of some of the world’s most used fonts.

Historically, fonts were an integral part of the typesetting machines—the core business of the company. To market their machines internationally, Monotype had to provide a wide range of scripts. Today Monotype’s fonts are—like all digital fonts—products that are sold independently conforming with various computer platforms.

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The first Monotype Arabic font, released in 1938, was simply named 'Arabic' or 'Urdu' in accordance with the character set variations suitable for each respective language. This font was later renamed Zohar, then Jawbar, and was popular in Eastern Islamic countries. In order to accommodate the tastes and needs of Middle Eastern countries, the Monotype Naskh typeface was developed in 1945 and released in 1947. The Monotype library has been expanding since the early days of hot metal typesetting, and additional typefaces have been designed since catering to a range of varied stylistic and functional needs (Mudir, Monotype Kufi, Monotype Thuluth, 1970s; Akhbar, Lakhdar Ghazal, late 1970s; Sabara, Shayan, Mudrastah, 1990; and Andali Arabic, late 1990).

Monotype and Agfa have recently merged, combining their expertise with their major business activities concentrated at the OPEX (original equipment manufacturing) level. Prior to their merger, they collaborated on the Creative Alliance containing their extensive type libraries. This CO offers a wide range of the most acclaimed Latin fonts, featuring some exclusive designs and representing famous designers and independent type foundries. Agfa Monotype’s extensive Latin library includes diverse scripts such as Arabic, Cyrillic, Chinese, Japanese, Korean, Thai, Indic languages and others.

Agfa Monotype continues working with renowned type designers in order to offer new typefaces each year. Other than research and development, Monotype is involved in initiatives that support cultural exchange for established type designers worldwide. Agfa Monotype has offices in the United Kingdom, Hong Kong, and the United States of America.
5. Mamoun Sakkal

Mamoun Sakkal is an award-winning architect and designer, born in Aleppo, Syria. He now resides in Washington State, in the U.S. His practice, Sakkal Design, has been producing Arabic communication graphics, including calligraphy, type design, and graphic design, for renowned local, national and international clients for the last 30 years. He lectures on Islamic art and architecture at the University of Washington, and maintains a website on Arabic calligraphy at www.sakkal.com.

5.2. Sameh

This a variation on typographic treatments which were popular in the Middle East in the 1970s, most likely originating from Iraq. The uniform proportions and simple forms are enlivened by a flourish at the end of the curved strokes that resembles hand calligraphy. The original concept was developed in 1976, and the digital version in 1992.

5.3. Sakkal Kufi

This is a family of fonts based on the traditional Kufi style. It includes many variations in letterforms and ornaments. It is designed in four weights all related to classical calligraphy. Driven by the ability to incorporate a large number of characters into one family of fonts, this typeface allows for typographic which is true to calligraphic traditions. The original concept was developed in 1994, and the digital version in 1999.

5.4. Arabtek

Designed in 2000 to be visually compatible with the English typeface Teknik, this design incorporates fine visual adjustments to make the Arabic letterforms more natural. The letterforms come from Kufi and Square Kufi. The compact proportions of this font make it especially useful where space is limited.
5.5. Al-Futtaim

The design of this typeface began as an Arabic logo compatible with English lettering. Special attention was paid to the needs of signage and environmental graphics, and representation in low resolution. This font solves the problem of long ascenders and descenders and opens up the counterforms of the letters. It creates a clear, sturdy, and highly legible effect without losing the fluid calligraphic feel. It is a contemporary typeface designed in 1998.

5.6. Shillia

This font was conceived in 1976 with very uniform proportions and open, large round shapes so it could be printed legibly in small sizes. The font was used in a Saudi company's logo and stationary in 1989, where the name Shillia was derived. A version of the typeface with short ascenders and descenders was created to be compatible with English lettering. Sakkal Shillia is a modern, clean, and compact font.
6. Linotype Library

Linotype Library GmbH is a Heidelberg Group company. It was formed in 1997 as a result of the well-known Linotype-Hell font business. Included in its library of typefaces, which is arguably one of the largest in the world (with more than 3,600 PostScript and TrueType fonts), is the entire collection of the Linotype non-Latin fonts. In accordance with Linotype's tradition—dating back to the beginning of this century—of providing high-quality Arabic typography, these fonts are best used in conjunction with recommended software.

Ahmed, Ahmed Outline, Al Harf Al Jaldid, Amer, Mariam and Mofid Mahdi are trademarks of Linotype licensors. Badr, Jalal, Karim, Kufi and Kufi Outline, Lotus, Mitra, Nazanin, Qadi and Yakout are trademarks of Heidelberger Druckmaschinen AG, distributed by Linotype Library GmbH.

Kufi was originally designed by the type designer Georges Dib, and produced in digital format for the 200 typesetter in 1987. Kufi Outline was designed in-house by Linotype-Hell to complement it. Certain letterforms were modified and spacing was adjusted.

Ahmed was first produced in digital format in the early 1980s. Originally designed as a simplified typeface, some additional medial forms were added later to ameliorate spacing and visual balance. It was recently converted into a PostScript font format.

Mariam was designed by the Arabic type design Ismet Chantour. As a modern headline typeface. It was produced in PostScript font format by Linotype-Hell in 1992.

Al Harf Al Jaldid, No.1 (the black titling font) and No.2 (the outline font), is a display typeface also designed by Ismet Chantour. It is a popular face used for Arabic magazines and newspapers. Originally developed as a digital font by Linotype-Hell in the mid-1980s, it became available in PostScript font format in 1989.

Mofid Mahdi was initially designed for dry transfer format, then developed as a digital font by Linotype-Hell in the early 1980s. It recently became available in PostScript font format. It offers additional characters for use in the Farsi language.

Amer was initially designed for dry transfer format, and licensed from Lettera Arabic. It was redrawn by Adrian Williams for Linotype-Hell before being digitised. It became available in PostScript font format at the end of 1992.

Mitra was designed and produced by Linotype-Hell in the 1970s. Mitra Bold was partially based on samples of Persian Nashk style, with the inclusion of more angular and chipped endings to give a brighter effect in print. The light face was developed from the Bold and given more evenly stressed characters. The ascenders were shortened and the fitting kept close for a more compact setting. The counters and teeth were enlarged to achieve greater legibility. Particular attention was given to the design of certain characters to avoid filling in during printing. The PostScript version of Mitra Light and Bold was produced in 1991, it makes use of digital technology to ensure accurate positioning of diacritics and kerning refinements. Mitra is particularly suitable for Farsi, though it can also be used for Arabic typesetting.
Badr Light and Bold is a traditional Naskh style, originally designed by Linotype-Hell for filmsets in the early 1970s. It was recently converted into a PostScript font format and improved for better printing results.

Jalal was designed in 1977. It became available in PostScript font format in 1992. It is characterized by its legibility and flexible kerning, which makes it a popular newspaper text font.

Lotus was designed by Linotype-Hell with the Ottoman Naskh style of foundry types as a model. Its classic look makes it a serious book typeface. Its PostScript version allows for accurate positioning of diacritics and kerning refinements. It carries additional characters for languages such as Kurdish, Farsi and Jawi.

Nazarin was originally named Haghighi, and was designed in 1998. It became available in PostScript font format in 1999. Its angular counters are characteristic of Persian display lettering.

Qadi is a traditional extra-bold typeface produced in the 1980s by Linotype-Hell, under the design direction of Walter Tracy. It was converted to a PostScript font format in 1989. It is popular as headline font for use in publications. It also caters for Farsi.

Yakout was developed in 1956 by Linotype and Machinery for hot-metal typesetting. In accordance with the constraints of the technology it utilised the limited set of letterforms. Its overall pattern works well in a newspaper setting. Its conversion into a digital format has enhanced the original design. In addition to Arabic, it also caters for Kurdish, Farsi and Jawi.

Qaluni was designed with the aim of creating a Nasta’liq font that is suitable for newspaper typesetting. The design evolved guided by feedback from a professional Nasta’liq calligrapher. The recently enhanced typesetting programme, sensitive to the diagonal progression of joined sequences, automatically sets diminished letterforms at higher levels allowing for economic line spacing. In the traditional Nasta’liq style, the challenge of the designer is to balance the stylistic effects (proportions, letter connections and modelling of shapes) in order to maintain a linear setting and avoid vertical clusters that connect lines above and below. Qaluni uses heavier horizontal strokes and lighter vertical ones, in order to create a linear reading flow.
7. Kris Holmes

Kris Holmes studied calligraphy at Reed College with Lloyd Reynolds and Robert Palladino. Following the recommendation of her teacher Lloyd Reynolds—"If you're interested in calligraphy, get interested in modern dance"—she began the study of modern dance in Reed College, then went on to Martha Graham's Modern Dance School in New York. In her words: "Letters are a dance on the page, moving through space like spoken sounds move through time. Each of my designs is a new exploration of the rhythm that vitalizes motion."

Her first work in type design was part of a team with Hans Eduard Meier, a Swiss lettering artist, Dell Hymes, an American anthropological linguist, and Charles Bigelow (her partner at Bigelow & Holmes). In collaboration with Bigelow, she designed a set of initials for the Atrion Press. Later on, she went to work as a staff type designer at Compucharge Corporation where she gained experience in both computer-aided type design and day-to-day demands of industrial type production. Her fonts include rta Stadara, Shannon (in collaboration with Janice Prescott), and Lucida (in collaboration with Charles Bigelow).

7.3. The Lucida international family

Together with her partner Charles Bigelow (Professor of Digital Typography at Stanford University) she designed and developed the Lucida font family for computer printers. The Lucida family includes four serifed and four sans serif designs. It has been recently expanded to comply with the Unisize standard, and includes non-Latin scripts such as Greek, Cyrillic, Hebrew, and Arabic.

In his treatise on calligraphy, The Rose Garden, the Persian calligrapher Shadi Ahmad writes:

The qalam is an artist and a painter.

God created two kinds of qalam: the one, ravishing the soul, is from a plant and has become a sugarcone for the scribe; the other kind of qalam is from an animal, and it has acquired its scattering pearls from the fountain of life.

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DecoType is a Dutch-German company specializing in typeface technology and linguistic concepts. It was founded in 1964 by Thomas Wals, Peter Strasser and Alfons Dietz. DecoType developed the concept of Dynamic fonts, their font Rinaldo (1993), which was inspired by Microsoft's work on fonts in the industry. Another major achievement was the DecoType System, which introduced the DecoType feature, enabling the creation of calligraphic fonts.

8. 8. 1. Makkah

DecoType's Makkah font, designed as a readable edition of a Makkah font, was developed by DecoType. The Makkah font is known for its readability and is often used for text in newspapers and publications. It is designed to be easily readable and to convey a sense of elegance and sophistication.

9. 9. 2. Cairo

DecoType's Cairo font, designed to resemble the handwriting of an elegant calligrapher, is known for its legibility and elegance. It is often used for text in magazines and newspapers.

DecoType's library includes a family of fonts that vary in calligraphic style, from the ornate Beauty font to the more straightforward Cairo font. The DecoType System is designed to simplify the management of these fonts, allowing designers to choose from a wide range of styles and fonts for their projects.
ذكرنا الكتاب بعدคำي لم يعلم
في آخر جوامع أورشليم وقال: أبنا المدغون واله:
门外 ما سأولئك تنك في أبا الكتابين كلًا علم;
قال: إذا كنت لا علمون فهما الساعدين من الكتابين
نستولوا في آخر فانقل علينا نصارى السؤال
فإذا علمونا هذا الدعوة: أهلا لنا علم، فكان:
ما دمت علمون ما سأولئك، فما الساعدين من الكتابين؟
في أهاده واقتفاها، بلى على أن تكون الإجابة في الدعا
أم إيمان بما نقصة قسم يجيب: لا، وقسم يجيب: تعبد
وأما الناس في سر الأسئلة وألغى عليهم سؤاله الأول
اختمت أصواتهم بين لا ونعم فكأنه:
حسن، من يعلم يعلم من لا يعلم.
Glossary of Terms

Some terms related to writing systems, styles, type of characters and fonts are explained in detail on the previous pages.

Accents. Marks that combine with the letters to create a new letter and a different pronunciation. In typesetting most accents are stored as separate characters and are called floating accents. For Arabic script most floating diacritic marks are termed vocalisation marks since their function differs from accents in Latin (see vocalisation marks). What does have a similar function to accents are the diacritic dots and miniatures (see diacritics).

Alphabetic script. Any writing system that uses an alphabet.

Alternate Shapes. Shape variations that represent the same character within the same font. They are used strictly for aesthetic reasons—unlike the mandatory shape variations of Arabic letterforms.

Anti-aliasing. A method of softening the contours of character shapes on a screen by adding to the black dots of the bitmapped image some dots in various gray tints.

Arabic Numerals. Numerals that use unique non-alphabetic signs to represent numbers. Their shapes (and names) derive from the Hindu-Arabic numerals. Arabic numerals in Latin type derive their shape from the Ghubar numerals that originated from Moorish Spain in the 12th century.

Ascender. Parts of lowercase letters that extends above the x-height (for Latin type), as in the letters ‘p’ and ‘q’, and above the tooth- and loop-heights (for Arabic type), as in the letters ‘Fah’ and ‘Kaf’.

ASCII. American Standard Code for Information Interchange was the first very basic standard character set for computer systems. It was originally limited to seven-bit binary information, resulting in the maximum number of characters of $2^7 = 128$. It was later extended to eight-bit characters, resulting in $2^8 = 256$ total characters.

Baseline. The imaginary line on which most letters sit.

Basket. A variation of the blackletter type style (see Blackletter).

Bézier Curves. Curves that describe the contours of characters in the form of mathematical formulas, describing the coordinates that form the curves. This way of representing outlines of graphic images is the essence of the PostScript page description language.

Bidirectional. A script that can be read in two directions. As in
Arabic where the letters are written and read from right to left, whereas numerals are written and read in the opposite direction from left to right.

Binary Codes. Computer instructions are delivered in codes, or strings of digits, using a binary system of the digits 1 and 0.

Biyali. The smallest unit of information in computer systems that represents either one of the two basic digits—1 or 0.

Bitmap. An image of digital typefaces on a screen is constructed of dots (or bits), and is called a bitmap font. This is often a coarse low-resolution representation of the type on a computer screen that describes the letterforms by assigning an address to each of the pixels that constitute the letterform. Some fonts have a special bitmap screen font as part of the font file, combined with the outline printer font used for more refined and flexible output resolution.

Blackletter. Northern European Gothic calligraphic style. It was used in the 15th century by Gutenberg for his metal types.

Body Type. Also known as body text. It is the small size of type used in setting regular reading matter. The body type sizes generally range between 6pt to 12pt.

Bowl. The rounded or elliptical parts of capitals and lowercase letterforms.

Byte. One byte equals eight bits. It is used to describe the size of word fonts based on the extended ASCII character set, with a total of $2^8 = 256$ characters.

Calligraphy. Beautifully hand-lettered connecting script. It is an integral part of the construction of Arabic type.

Cap Height. The height of capital letters in Latin, and the letter 'Aleph' in Arabic.

Characters. The basic skeletal shape that represents the letters and the non-alphabetic signs in a typeface. In computer systems they are the elements of a font that are assigned numeric codes (or character codes).

Character Count. The number of characters in a line, paragraph, or block of text.

Character Set. The set of characters that constitutes a typeface.

Character Width. The width of a character within the em square.

Colour. In typography it refers to the general overall balance between the letterforms and the surrounding white spaces.

Composing Stick. A small metal device used for handsetting (or composing) individual movable type into lines of text.

Consonantal. All Semitic scripts are consonantal. The letters mark only the consonants, the vowels are short and sometimes represented by small vocalisation marks that combine with the letters in different positions (in Arabic, either above or below the letters).

Contrast. In reference to type, it is the contrast between line thicknesses, and the letterforms and their counters. It determines the general colour of typefaces and text, and varies according to type style and weights.

Counter. The white space totally or partially enclosed by a letterform, as in the letters O or C.

Counterpunch. The steel punches of the counterforms. They are the negative image of the punch used to strike the punch, before modeling the outer shape of the punch (see Punch).

CTe (Cathode Ray Tube). An exposure system invented by the German Dr. Rudolf Hell in 1965. It allowed the use of photographic typesetting techniques (see phototypesetting).

Cuneiform. A written script developed by the Sumerians in Mesopotamia ca. 2600 BCE. Its name refers to the wedge-shaped glyphs (cuneus being Latin for wedge), resulting from the impression the writing tool (the stylus) made in the wet clay tablets.

Curled Tail. The ending of terminal or free-standing letters in Arabic that are terminated with an upwards curling stroke, as in the letter Reh.

Cursive. Text that flows smoothly, as in handwritten text. In Latin it is sometimes used in reference to Italic fonts. In Arabic it refers to all styles characterised by flowing strokes with letterforms that are not geometrically drawn. It generally refers to all non-Reh calligraphic styles.

Descender. The part of letterforms that falls below the baseline. In Latin it is the part of lowercase letters such as p and g. In Arabic it is all the ending stroke in free-standing and final shape variations of letters such as the Saad, Ayn and Waw.

Diacritics. The small marks that combine with letterforms to indicate a phonetic value different from that of unmarked letters. In Latin they are generally referred to as accents. In Arabic they consist of the diacritical dots and miniatures that have the same function of the accents in Latin, and the vocalisation marks that represent the short vowels, the diphthongs, and the consonant enhancers.

Didone. French and Italian type styles from the early 19th century, such as Didot and Bodoni.

Digital. All computer systems using strings of binary digits for encoding information (see also binary codes). It is also a term for all electronic technology that has become the core of all image and type production since the 1980s. It manifests itself in a wide variety of applications and media, representing communication technology and the visual arts at the end of the 20th century.
**Dingbat.** All typographic glyphs, pictographs, pictograms or illustrative symbols that are non-alphabetic though they constitute either parts of a font, or the character set of PitFonts.

**Diphthong.** The prolongation and stress of the phonetic values of vowels.

**DPI (Dots Per Inch).** All computer output is measured by DPI resolutions. Output devices, such as laserprinters and image-setters, have various degrees of DPI resolution to reproduce type or images. The higher the resolution, the higher the number of dots per inch, the finer and sharper the image.

**Display Size.** The large size of type used for setting titles and large type. Display types are generally not designed for setting large amounts of text and do not take into consideration legibility at small sizes. They are sometimes decorative, with fine ornamental details that are lost at sizes smaller than 14pt.

**Dry Transfer.** Types of type (or graphic symbols) developed in the 1960s by companies like Letraset and Mecanorma, that could be rubbed down on an artwork by hand, with letters manually placed and spaced on a line, replacing the need for any typesetting device.

**DTP (Desktop Publishing).** The computerised design and production of printed matter made possible by the low-end (low-cost) personal computers developed in the 1980s. It unified the design and production of printed matter into one machine giving designers full control over the end product.

**Em.** The square measure of a type body size (i.e. 12 pt cm square for a 20pt type, 14 pt cm square for 14 pt type). It gets its name from the old metal types when the capital letter M was cast on a square body.

**En 1/12 em measure.**

**Extended.** A horizontally wide proportion of a regular typeface.

**Eye.** The space fully enclosed by parts of a letter, as in the lowercase letter e in Latin, and the enclosed counters in Arabic of letters like the Waw and the Sad.

**Family.** All type sizes, weights and styles of a particular typeface.

**Final.** In Arabic script it refers to the shape variation of a letter in its final position within a word.

**Flat Tail.** The ending of terminal or free-standing letters in Arabic with a flat stroke that extends horizontally along the baseline, as in the letters Reh and Teh.

**Font.** The set of all characters that constitute a typeface. In metal type a font was specific to a type size, but with phototypesetting and later digital type size is no longer relevant.

**Fraktur.** A variation of the Blackletter type style (see Blackletter).

**Free-standing.** In Arabic script it refers to the shape variation of a letter in its isolated position — when it is not connected to other letters.

**Galley.** A metal tray device that holds lines of composed metal type, used for transporting type to the printing press.

**Garamond.** French and Italian Renaissance type style.

**Glyph.** The specific shape of a character.

**Grid-fitting.** The translation of the outline of letterforms into pixel dots that matches the grid of the dot resolution of the computer screen. It is one of the aspects of hinting information (see Hinting).

**Halftone Raster.** Raster screens used to represent photographic images. It represents tonal gradations in an image by the size and density of small dots.

**Handsetting/Hand composition.** Setting metal types by hand.

**Hanging Figures.** Also known as Old Style or Text figures. They are non-lining small figures that blend in text harmoniously because of their size, the fact that they have ascenders and descenders, and their regular text letterspacing.

**Hardware.** As opposed to Software, are the parts of a computer that are tangible, such as the screen, the computer chips, and the paraphernalia of wires and devices.

**Head.** The elliptical top part of Arabic letters like the Ayin.

**Hieroglyphs.** From Greek hevs meaning sacred, and glyph meaning engraving. An ideographic writing system, developed in Egypt ca. 3100 B.C. (see Ideographic).

**Hinting.** Computes functional instructions that ensure the most accurate representation of type at different sizes and different resolutions for various output devices and conditions. It is based on the principle of interpolation, which implies that a shape will be transformed into a different one better fit for certain conditions, while still keeping the characteristics of the original. It is very crucial for small type on low-resolution output where distortion of the letterforms is inevitable. There are many kinds of hinting instructions that range from the general instruction at the level of the whole font, to glyph-specific information.

**Hot Metal.** A term used in reference to the production method of lead type which were cast from hot lead that was poured in copper moulds (see Matrix).

**Humanist.** Also known as Venetian Old Style. It is an Italian 15th century type style based on the classical Roman letterforms.

**Ideographic.** A writing system that uses characters or symbols to represent certain ideas or concepts (i.e. Chinese script).

**Initial.** In Arabic script it refers to the shape variation of a letter in its initial position within a word.
ISO. International Standard Organisation, whose function it is to
set international industrial and scientific standards.
Italic. A type style cut by the printer Aldus Manutius in the 15th
century. It is slightly narrower than regular faces and slants
to the right. It has its own shape variations for certain let-
ters. In this it differs from slanted oblique typefaces that are
an exact slanted variation of the roman type.
Kashida (see Semitic Justification).
Kerning. A specific feature of individual letters in Latin type, and
is not applicable to script fonts or Arabic type. It is the alter-
ation of letter spacing by extending a part of a letter into the
space of another. It is commonly used in italic fonts, and
where the combination of two letters is not aesthetically
pleasing, as in the kerning pairs Jo and Yh.
Knot. The closed filled-in part of Arabic letters like the Ayn in
medial position, in cursive styles.
Kufi. One of the main styles based on geometrically constructed
letterforms with a strong fl at horizontal connection
between letters that sit on the baseline.
Leading. Also called lining spacing. The space between lines of text.
It is a term from metal type referring to the piece of lead
inserted between lines of text.
Lettering. Hand-lettered script, whereby each letter is construct-
ed of more than one stroke and corrections on the drawn let-
ters is possible.
Letterpress. The printing method used for printing from movea-
ble metal type, based on relief printing.
Letter spacing. The spaces between letters.
Ligature. Two or three letters joined to form one character. In
Arabic ligatures are abundant due to the calligraphic nature
of the script, especially in certain cursive type styles.
Lineale. Also known as Grotesque, Gothic or Sans Serif. An early
20th century Latin type style, with minimal stroke contrast
and no serif endings.
Lining Figures. Also known as T1E1ng or Modern figures. They
match the capital letters in height, and are monospaced.
They are used for tables because they align vertically form-
ing clearly defined columns.
Logogram. A specific typographic symbol representing a word, as
in © for copyright.
Loop. The loop-like part of Arabic letters that enclose a counter, as
in the letter Fuh in its medial position in cursive type styles.
Loop-height. One of the measures of Arabic body type based on
the distance from the baseline to the approximate height of
letters with loops.
Lowercase Figures (see Hanging Figures).
Matrix. The mould in which hot metal is poured for casting lead
types. It carries an impression of letterforms that had been
struck into it by a punch. In Phototypesetting, it refers to the
grid that carries the character set of a font.
Medial. In Arabic script it refers to the shape variation of a letter
in its medial position within a word.
Modulation. In type it refers to the variation in the thickness of
the stroke in a letterform.
Monoglyphic. (see syllabic).
Monospace. A term key to fonts with exactly the same
width/space for all characters, such as typewriter fonts.
Multiple Masters. Parametric fonts that provide the possibility of
making fonts on the fly by manipulating outlines within a
given set of one or more built-in parameters. Multiple
Master fonts contain two masters at the extreme of each axis (for instance, the tightest and the boldest parameters on the weight axis) between which many customised variations can be made, through mathematical interpolations.
Naskh. The second main Arabic type style. It is a cursive style gen-
erally used as text face for Arabic fonts because of its clear
and simple letterforms.
Nasta`liq. The cursive type style used as text face for setting the
Persian language.
Noblocry. The part of Arabic letters that enclose a very small
counterform, as in the letter Wow.
Negative Leading. Minus linespacing that was made possible by
the phototypesetting technology.
Oblique (see Italic).
OCR (Optical Character Recognition). OCR devices are machines
that can scan and interpret text for computers to process as
information. It generated the design of new typefaces with
emphasis on clarity and individuality of letterforms.
Old Style Figures (see Hanging Figures).
Output Device. Devices such as laserprinters and image-setters.
Pantograph. An instrument invented in 1834. It was employed
for engraving copper matrices and punches by tracing
large-sized letterforms and engraving their exact shape in
smaller sizes.
Papyrus. A reed that grew along the Nile river, from whose
leaves the Egyptians invented the principle of writing
sheets, weaving the dried leaves into a flat surface.
Parchment. A material fashioned out of animal skin invented by
the Greeks as writing support. The name refers to its place of
origin Pergam in Asia Minor.
Phototypesetting. Also known as photo-composition, is the
technology that allowed the use of photographic techniques for setting type. Using one partially transparent set of matrices, a strong light source, a set of lenses, and a mechanical transportation system for the photosensitive paper or film to be exposed. It allowed for setting type on film or paper to any desired size using the same master matrix.

**Font** (see Dingbat).

**Pica.** Equal 12 points, approximately 1/6 inch (see Point).

**Pictographic.** Primitive writing systems that used pictures (as in simple drawings) of concrete objects to indicate words or concepts. Our contemporary version are the pictograms used in signage and environmental graphics.

**Pixel.** Short for 'picture element.' It is the smallest square unit that makes up an image on the computer screen. A picture may be built out of thousands or millions of pixels.

**Point.** The smallest measuring unit for type where 1 pt = approximately 0.75 inch. There are two point systems: the Pica English/American system (1 pt = 0.356 mm), and the European Didot system (1 pt = 0.331 mm). Type sizes are always measured in points.

**PostScript.** A page description language, based on Bézier curves, invented by Adobe Systems in the 1980s (see Bézier curves).

**Printing Types.** The individual pieces of moveable metal types used in the early days of typographic printing.

**Programme.** A generic term for all computer software applications that can perform a specific task. There are word processing, font-design, 2- and 3-dimensional drawing, photo-manipulation, animation, page-layout, calculation and other kinds of programs.

**Punch.** The hard steel metal bar carrying the master design of one character of a font, and used to strike a negative impression into the copper matrix which will be used as mould for casting as many copies of the same character out of lead.

**Punchcutter.** The highly skilled craftsman who drew the design of a font directly on the steel, then cut and fashioned the punches by hand.

**Ranging Figures.** The same as lining figures except that they can be sometimes smaller than capital letters.

**Raster.** A digital grid (see Ruling).

**Rasterisation.** The process of converting an image into a series of dots that can be stored in a computer and processed as data.

**Resolution.** The fineness of the representation of images on output devices (i.e. computer screens, laserprinters, image-setters, etc.) measured by the number of dots per inch (dpi).

**RIP (Raster Image Processing).** A device for rasterising outline information into a series of dots produced to a density compatible with that of the output device.

**Roman.** Letters that stand straight at 90° to the baseline, as opposed to Italic or Oblique type.

**Roman Numerals.** Numerals written with Roman capital letters.

**Rotunda.** Variation on the Blackletter type style (see Blackletter).

**Rupa.** A cursive Arabic type style for everyday writing.

**Sans Serif** (see Lineale).

**Script.** The visual representation of any written language. It also refers to calligraphic type styles that imitate handwritten text.

**Semitic justification.** Known in Arabic as Khashiha, is a method of stretching letters horizontally for justification purposes. Since letters in Arabic are connected to each other, space cannot be added between individual letters.

**Serif.** Strokes that terminate the end of a main stroke of a letter. They can form either an abrupt stop or a smooth ending. Serif change in shape according to type style and the design of the typeface. There are no serifs in Arabic typefaces.

**Shoulder.** The flat horizontal stroke that rests over the 'bowl' part of Arabic letters, as in the letters Keh and Heh in their free-standing position.

**Slack Tail.** The ending of terminal or free-standing letters in Arabic that are terminated with a stroke that hangs below the baseline, as in the letter Mim.

**Slugs.** The process of casting lines of metal type as one whole piece of metal or slug. It was the hot-metal typesetting system launched by Linotype in 1886. The keyboard was directly attached to the mechanical typesetting/typocasting machine.

**Small Caps.** Small capital letters that have similar stroke weight and letterspacing as lowercase letters, and therefore blend harmoniously in a text. They are used in body text to mark abbreviations.

**Software (see Programme).**

**Sort.** One piece of metal type.

**Stem.** The vertical stroke of letterforms.

**Stiff Tail.** The ending of terminal or free-standing letters in Arabic that are terminated with a sharp curved stroke that extends below the baseline, as in the letter Waw.

**Stroke.** The angle of the thickening point in a stroke, implying the axis of the pen. In modern typefaces the stress is vertical in Old Style typefaces it slopes to the left.

**Swash.** The flourish stroke that extends the beginning or ending of letters.

**Syllabic.** Some writing systems are syllabic consisting of
characters that represent syllables, as opposed to isolated
consants and vowels. These can be monosyllabic (repre-
senting one syllable at a time), bisyllabic, or even trisyllabic.

Text Figures (see Hanging Figures).

Textura. A variation of the Blackletter type style (see Blackletter).

Tooth. The short vertical strokes sticking and extending upwards
from the baseline out of open Arabic letters, as in the letters
Beth, Feh and Sin in their initial or medial positions.

Tooth-height. One of the measures of Arabic body type based on
the distance from the baseline to the approximate height of
of letters with ‘teeth’.

Thuluth. An Arabic cursive type style from the 7th century.

Titling Figures (see Raised Figures).

Trisyllabic (see syllabics).

Type Metrics / Font Metrics. The crucial measurement systems
that have accompanied the production of type from the
early days of movable metal types, until today’s digital type
(see dedicated section on page 189).

Type Size. The size of the body of a type measured in points.

Typocasting (see Matrix).

Typeface. Originally it was the drawn design before a font was
produced. This separation is no longer relevant to digital
fonts (see Font).

Typefoundry. Originally it was where fonts were cast. Today the
term refers to companies that design, produce and market
digital fonts.

Typesetting. Setting type in lines of text and columns. With mov-
able lead type it was done manually (see handsetting), then
photographically (see photosetting), and today it is
done digitally with the help of computer programs.

Uppercase. Capital letters of the Latin alphabet. Arabic has no
upercase letters.

Venetian Old Style (see Humanist).

Vocalisation Marks. Diacritics signs that mark short vowels, diph-

gongs and consonant enhancers in Arabic.

Weight. The thickness of the stroke of a typeface.

Woodtype. Type cut from wood, used for display sizes larger than
one inch.

Woods. Wood engraved blocks used for relief printing.

Wordspacing. The space between words.

WYSIWYG. ‘What you see is what you get’ computer interfaces
that display on the screen a close visual representation of
what can be the output.

X-height. The distance from the baseline to the meanline, which
is approximately the height of the unextended parts of lower-
case letters, as in letters like x, m, n, etc.
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Articles


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