The development of Calouste

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The University of Reading
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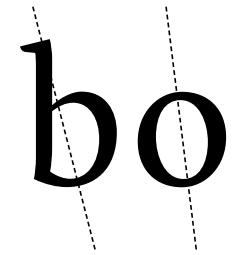
Introduction

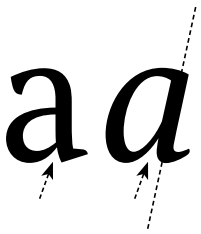
The following pages describe the design process of *Calouste,* a typeface designed by Miguel Sousa in partial fulfilment of the requirements for the Master of Arts in Typeface Design, during the academic year 2004–2005.

This work is generally written in an informal tone and takes the form of a pseudo log file. It is supported by the elements contained in the workfile, often refering to its sections.

The main aim was to include all the significant design and production steps, taken while developing Calouste. Decisions, comments, notes, thoughts, afterthoughts and events, that might have played an important role during the process, have been listed and included in the respective time period.



Minion *Dolly*



About Calouste

Calouste is a contemporary digital typeface designed in two variants, roman and italic, and covering two scripts, Latin and Armenian.

The design of the roman is inspired on the old style roman typefaces of the late Renaissance, featuring an oblique axis, modest contrast and modulated strokes. Despite following these qualities and conventions to some extent, Calouste departs from them by incorporating modelled serifs and terminals. Although these do not derive directly from the pen stroke, they carry a pleasant calligraphic feeling and add smoothness and fluidity to the letterforms.

The capital height is lower than the ascender height. This helps to balance the perceived size of the capitals in comparison to the lower case, especially in small text settings and particularly in languages with a higher frequency of caps, like German. Furthermore it allows the necessary space to correctly place diacritics, which in some instances have a steeper angle in the lower case.

Two typefaces have somehow influenced the development of Calouste: *Minion* and *Dolly*. From the first it acquired its formality, and from the second it captured its livelyness. The result is a balanced easy-to-read type design, that might feel conventional and modest at first glance, but is fairly alive and distinct once seen closer.

Calouste's italic variant is a subsidiary design to the roman and closely linked with it, without being subservient. The calligraphic qualities, already present in the roman, are emphasised in the italic, giving it an even more dynamic and vivid feeling.

It is a true italic in the sense that, in comparison with the roman, it's slightly lighter in colour, condensed and has alternate letter shapes. In short, it's not simply an inclined roman. Calouste Italic uses an average slope angle of 12 degrees, which makes it comfortable and unobtrusive to read in long text passages, while being distinctive enough from the upright variant. Deeper cuts and smoother connections help to enhance the flow of the strokes.

The wider repertoire of terminals, in–strokes and out-strokes present in the italic, make it a more interesting and graceful design than the roman. Nevertheless both variants share sufficient characteristics to be recognised as elements of the same type family.

The elegant design of Calouste Italic is characterised by an overall formal appearance and uniform rhythm that emulates the motion of the pen in italic writing. However this evenness is deliberately, though scarcely, broken with embedded features in the typeface.

Although significantly different in structure, Calouste Italic harmonises beautifully with the roman variant, making it suitable for complex text settings. Being clearly distinct and expressive, it can also be simply used on its own, giving a warmer, delicate and, eventually, feminine touch to the page. All in all, Calouste Roman and Italic definitively have a Southern-European spicy flavour that can bring some interest to a rather dull printed document.

Calouste Armenian is the non-latin counterpart of the roman variant. It is

Roman

Armenian

Italic

an independent and uncompromised design, informed by each script's specific typographic (and calligraphic) legacy. Nevertheless there is a visual harmony between the two and thus, when setting a bilingual text, none will overpower the other. The result is a page with an even colour, due to the careful balance of both script's weight, design features and perceived size.

The design of Calouste Armenian was highly inspired by the works of Fred Africkian, Hayk Gortsakalyan and Henrik Mnatsakanyan. Many digital and non-digital Armenian typefaces were also examined closer during the development process. These elements, along with the analysis of reproductions of Armenian manuscripts from the 9–19th centuries, constituted the main resources. The font was also submitted to the appreciation of native readers, who gave very positive and constructive feedback, not only on the overall design but also on specific details. This definitely played a crucial role in the design process, making it more interesting, interactive and enlightening, which is reflected in the final output.

Both roman and italic variants of Calouste include extended Pan-European character sets, allowing it to be set in a large number of languages including Albanian, Basque, Bosnian, Breton, Catalan, Croatian, Czech, Danish, Dutch, Esperanto, Estonian, Faroese, Finnish, French, Gaelic, German, Greenlandic, Hungarian, Icelandic, Irish, Italian, Latvian, Lithuanian, Luxembourgian, Maltese, Norwegian, Occitan, Polish, Portuguese, Romanian, Slovak, Slovene, Serbian (Latin), Sorbian, Spanish, Swedish, Turkish, Walloon and Welsh among others. The Armenian character set is only included in the Regular font version.

In conclusion, Calouste is a discreet yet competent — two characteristics which probably reflect its designer personality — all-purpose text typeface that incorporates a calligraphic flavour. It was initially intendend for composing office documents (letters, memos, general correspondence, reports), but will confortably set long texts in small type sizes (8-14pt) in various languages.

Glyphsets

Calouste-Regular

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789 0123456789
ÀÁÂÃÄĀĂÅǺĄÆǼĆĈČÇ̌ĊÇĎĐĐÈÉÊĚËĖĒ
ĔĘƎĜǦĞĠĢĤĦÌÍÎĨÏİĪĬĮIJĴǰĶĹĽĿŁĻŃŇÑŅŊ
ÒÓÔÕÖŌŎŐØǾŒÞŔŘṘR̄ŖṚŚŜŠŞȘŤŦŢȚ
ÙÚÛŨÜŪŬŮŰŲẀẂŴẄỲÝŶŸŹŽŻ
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Calouste-Italic

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789 0123456789
ÀÁÂÃÄĀĂÅǺĄÆǼĆĈČÇĊÇĎĐĐÈÉÊĚËĖĒĔĘƎ
ĜĞĞĠĢĤĦÌÍÎĨÏİĪĬĮIJĴĴĶĹĽĿŁĻŃŇÑŅŊÒÓÔÕÖ
ŌŎŐØǾŒÞŔŘṘŖŖŚŜŠŞȘŤŦŢȚÙÚÛŨÜŪŬŮ
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OpenType features

Ligatures

ff fi ffi fj ffj fl ffl fb ffb fh ffh fk ffk
ff fi ffi fj ffj fl ffl fb ffb fh ffh fk ffk
ff fi ffi fj ffj fl ffl fb ffb fh ffh fk ffk
ff fi ffi fj ffj fl ffl fb ffb fh ffh fk ffk
մն վն մե մէ մի մխ
մն վն մե մէ մի մխ

Case-sensitive punctuation

([{H}]) ¿¡»I-O·N«!? ©E@
([{H}]) ¿¡»I-O·N«!? ©E@

Case-sensitive numerals and currency symbols

A0B1C2D3E4F5G6H7I8J9K€L$M£N¥O¢P
A0B1C2D3E4F5G6H7I8J9K€L$M£N¥O¢P

Capital spacing

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ

Numerals: old-style (default), tabular old-style, lining and tabular lining

1011121314151617181901
1011121314151617181901
1011121314151617181901
1011121314151617181901

Case-sensitive mathematical operators

0+1−2×3÷4±5=6≠7≈8<9>0≤1≥2
0+1−2×3÷4±5=6≠7≈8<9>0≤1≥2

Localized forms (Moldavian and Romanian)

Ş Ș ş ș

Note: *Localized forms is not yet supported by Adobe InDesign up to version cs2.*

Armenian transliteration

In addition to the large Pan European latin glyph set, Calouste also includes the necessary characters to transliterate Armenian, covering the following systems:

— Hübschmann-Meillet;
— International Standards Organisation;
— American Library Association/Library of Congress;
— United States Board on Geographic Names/The Permanent Committee on Geographical Names for British Official Use;
— Kohanimeandmebaas (Place Names Database) of Eesti Keele Instituut (Institute of the Estonian Language).

Additional characters

Ç̌ç̌ Ǝə Ğğ J̌ǰ Ṙṙ Ṛṛ R̄r̄

The characters that do not have Unicode code points assigned (Ç̌ç̌R̄r̄) are composed via the "Glyph composition/decomposition" OpenType feature.

From: Miguel Sousa
To: Gerry Leonidas
Date: 8 October 2004
Subject: **Project brief**

I would like to develop an all-purpose typeface that includes a non-latin script. The reasons for this are explained below.

The idea started when I applied for a scholarship to allow me to do the Master of Arts in Typeface Design (MATD) programme. By then, I still had no clue of what I intended to do at Reading, so I submitted the application with just a general idea. Once I got it, I felt that I shouldn't arrive at Reading without a project laid out, so I started looking for a subject to work on. The first thing that came to mind was to start at my sponsor's website, Fundação Calouste Gulbenkian (FCG). As soon as I began reading about Gulbenkian's life story, I found that he had an Armenian background. This was the turning point of this story. From there on an overwhelming cascade of ideas flooded my head.

A long time ago I recall to had seen a "weird" typeface in *Linotype*'s catalogue. I looked for it and there it was again: Hrant Papazian's *Maral*. While looking at the unfamiliar letterforms I thought to myself "Hey, maybe I can try to do that!". I have to say that by this time I had already seen all the previous MATD student projects I could find online. As none of these involved the Armenian script, I thought this might be an interesting path to take.

My other goal is to output something that addresses a need, not just one more work to put in my portfolio. I know that FCG supports several students every year who have to submit reports periodically. This Portuguese institution also has an Armenian Communities Department. Creating a typeface that can be used in these two situations sounds useful and interesting.

I'm also concerned with which titles to choose for the Essays and Dissertation. By deciding to design an Armenian typeface, I believe that those subjects will be easier to settle. Since I know nothing about Armenia and the Armenian alphabet, I will have to research in order to start designing the glyphs. This research material can then be used to do the written component of the programme and document the design process taken in the practical.

I've already done some quick research on the subject, and what I feel is that most of the Armenian typefaces commercially available (*ParaType*'s for example) came after the Latin version. My believe is that this direction might influence the design of the Armenian letterforms somehow. Although I'm not sure if this is the best (or even possible), the approach I would like to take is the opposite. What I'm about to say is probably nonsense, but I think that by starting with letter shapes I'm not familiar with, will help me to end up with a more original Latin typeface design.

Miguel

Initial events

Period: October and early November

The academic year's start was full of events. We had the Speedball workshop with John Downer during the whole 2nd week (10–15 October), the 3rd week was completed with the BadType conference in London from the 18th to the 20th and Thomas Phinney's lecture on Unicode and OpenType on the 21st. Mary Dyson's Legibility Research took place on the 2nd of November.

Apart from James Mosley's, Gerry's and Research Methods' lectures, nothing really happen in the typeface's design front, strictly speaking. Therefore most of the time was spent exploring Spur H's collections and getting to know the items held in the university's library (some of which rare).

One of the books read during this period was Fred Smeijers' "Counterpuch". It introduced me to the aspects of designing letterforms that had to be translated to the punch — later to the matrix and finally to the type —, I was not aware of. For me this book opened a door to look at typeface design in a different way, and made me realise how much the tools may influence the design.

Searching for inspiration

Workfile section: 1
Period: October and November

Sample of some of the photocopies taken from books, catalogues, specimens and other publications. I have to admit that Jan Middendorp's "Dutch Type" was an amazing book to look at, as it shows dozens of beautiful typefaces created by Dutch type designers. Most design's originality and distinct features — while being legible — impressed me. As I was searching for character to embed in the design of my letterforms, I believe this gave me good ideas to start with.

I also examined older designs by Fleischman, Fournier and others, to get a feeling on the old models and proportions.

Selecting reference typefaces and getting the right proportions

Workfile section: 2
Period: 5 November

Selected several typefaces — either because I liked some of its features or because they belonged to the category of typefaces I was aiming for (all-purpose text faces) — and printed the word "adhesion" with an x-height of 5 centimetres. As referred by Gerry, this size is large enough to permit the sketching of

fine details. It's also not too big, allowing the correct control of long strokes.

These prints helped to get good initial proportions (stem width, serif size, character width, relation of ascenders/x-height/descenders) for the typeface.

Other pages included the fonts Enigma, Le Monde, Lexicon, Hoefler Text and Sylfaen.

Initial sketches and size reduction tests

Workfile section: 3
Period: 15 to 20 November

Supported by the previous prints and having in mind some ideas for features to include, I started sketching. I didn't spend too much time on it, as my intention was to get some shapes that I could digitise and convert to outlines. Once in the computer I could place and shape the curves how I really intended, as I find it easier to do it with Bezier rather than pencil.

As I wanted the typeface to be distinguishable from my references, I designed the counters with smoothen angles, thinking that those would be the features of the letterforms.

After filling-in the pencil outlines with black ink and before scanning them, I made some reductions using both optical and digital photocopy machines. This helped to test the stem width, the overall proportions, the behaviour of the design features, and to preview the letterforms at small sizes.

On the 16th made the first contact with Gayaneh Bagdasaryan from ParaType, in order to get information about their Armenian fonts.

Getting started on outlines

Workfile section: 4
Period: 23 to 26 November

Using Illustrator, the scans were converted to outlines. These were then scaled down to different sizes to predict the shapes' behaviour.

The letterforms were later submitted to Gerry's first critic. He mentioned that the angles in the counters were too noticeable and created distraction. Nevertheless he found interesting the way in how the soft outside contour could be combined with the angled counter. He also referred the inexistence of serifs in some of the terminals, which were added later. The in-stroke serifs on the vertical stems also felt somehow strange to him, as these seemed to be inversely emulating the pen strokes.

After purchasing Fontlab on the 26th, the outlines were transferred to it and the first version of the font was generated and briefly tested.

Checking proportions

Workfile section: 5
Period: 26 November
Font version: 0.0 and 0.1

Runs of letters were set alongside two reference fonts (Minion Pro and Times New Roman). This was used to test and compare different point sizes, character width (and line length), side bearings, line spacing, overall texture and proportions.

Multiple Masters workshop

Workfile section: 6
Period: 2 and 3 December
Font version: 0.2

The MM workshop directed by José Scaglione, was not only a good and fast way of learning Fontlab's MM tools, but also an interesting insight of eventual future weights of the typeface.

The MM technology itself was not difficult to understand and to use, given that one follows the correct procedures. The hard part for me was getting the right design of the masters. Started by creating a Condensed version from the Regular, and then an Expanded also from the Regular. Later created a Condensed Bold from the Condensed, and an Expanded Bold from the Expanded version. To my surprise, for some reason the Condensed Bold and Expanded Bold versions ended up looking very similar. Later found out that it's easier to do the Expanded Bold starting from the Condensed Bold.

First contact with Vrej Nersessian, the curator of Armenian in the British Library, on 3rd December.

Searching for the right serifs and serif combination

Workfile section: 7
Period: 6 December

Printed the typeface with the serifs trimmed and sketched new serifs, searching for harmony across all the letters.

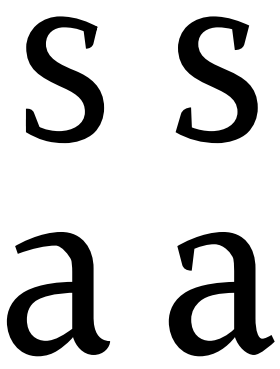
Bold workshop

Workfile section: 8
Period: 8 December

With the Bold workshop Gerard Unger's wanted us to use Century Schoolbook's skeleton as a start for new typeface designs. As I already had a good idea of the path I wanted to take for the letterforms I was developing, apart from learning Gerard's interesting method to make a normal letter bolder, I didn't take much advantage of the workshop. Therefore it was mainly an opportunity to apply the knowledge acquired in the MM workshop, and revisit the Bold Expanded issue.

Early font versions

Workfile section: 9
Period: 10 to 16 December
Font version: 0.3 to 0.6



v0.1 *v0.3*

Created first test documents and compared text settings with other typefaces.

In-stroke serifs on the vertical stems were flipped now resembling pen strokes more closely. Terminals in letters "a" and "s" are now related with the serifs on other letters. Angles in the counters were flattened.

Meeting with the curator of Armenian in the British Library on the 13th. Went fine but not remarkably. Was difficult to explain him what I needed. He seemed busy and not particularly interested. Discussed mostly technical issues about Armenian keyboard layouts. First look at the book "Album of Armenian Paleography".

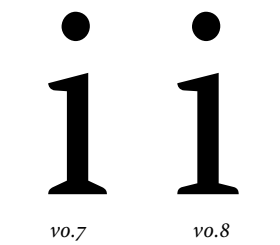
Letterpress prints

Workfile section: 10
Period: 11 December
Font version: 0.4

Letterpress experiment organised by Ben Kiel. Interesting to compare the typeface's behaviour in different papers and against a laser print.

Changing foot serifs

Workfile section: 11
Period: 17 December
Font version: 0.7



v0.7 *v0.8*

Gerry mentioned the serifs seemed too narrow and thick. Used MM to change them.

Expanding the lowercase basic set

Workfile section: 12
Period: 17 December to 24 January
Font version: 0.8 and 0.9

Serifs now longer and thinner. Lowercase basic set expanded with introduction of the letters "c, f, j, k, t" and "v".

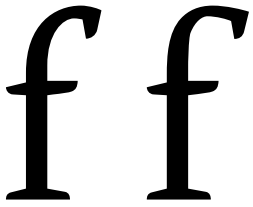
Christmas vacation from 11th December to 9th January.

Text utility (later adhesiontext) released internally on 14th December and updated with new features on 17th December.

Contacts with Kamal Mansour on 12th January to obtain Monotype's fonts.

Book "Album of Armenian Paleopgraphy" requested by inter-library loan on 13th January and collected on 17th January. Available until 22nd February.

Firt essay due on 18th January.



v0.10 *v0.11*

Searching for the "f" overhang

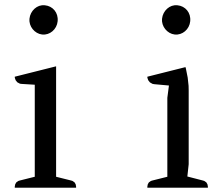
Workfile section: 13
Period: 24 January
Font version: 0.10

Gerry suggested a different overhang for the "f". Collected ideas from the Bukva:raz! exhibition held in the department.

Completing the lowercase basic set

Workfile section: 14
Period: 25 to 28 January
Font version: 0.11 to 0.14

Completion of lowercase basic set.



v0.15 *v0.16*

Adding flavour to the design

Workfile section: 15
Period: 30 January to 1 February
Font version: 0.16

Gerry told me that although the typeface was fairly competent, the design was quite dull and was missing some character. I searched for typefaces with character and compiled a list called "Quirky faces". It included Electra, Californian, Centaur, Legacy, Jenson Pro, Poliphilus, Warnock Pro, Chaparral, Vendetta, Mrs Eaves, Alisal, Quadraat, Trinité, Lexicon, Scala, Proforma and Enigma.

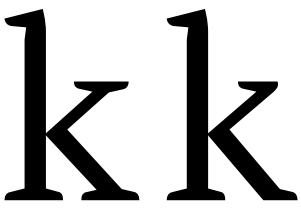
The study of these typefaces originated changes in the joints between stems and serifs.

Testing different printers (1st run)

Workfile section: 16
Period: 31 January
Font version: 0.15

Same document printed in different printers. The texture is lighter but the typeface resists. (Sketches in overleaf for v0.20)

ParaType's Armenian fonts bought.



v0.19 *v0.20*

Experimental phase

Workfile section: 17
Period: 1 to 7 February
Font version: 0.17 to 0.24

Despite the previous changes on the stems, the typeface was still looking too conservative and lacking life, as Gerry said. In a desperate quest to alter that condition, funky things started happening to some letters. As Gerry says "You'll only realise you went too far once you get there." I guess that's what happened. We also had Gerard's first critic, which helped making thoughts clearer.

v0.25 *Calouste*

Turn point in stem's design

Workfile section: 18
Period: 10 to 19 February
Font version: 0.25

Showed latest font version to Nadine Chahine during TypoTechnica. Got good feedback and ideas that sparkled changes in the design of stems. These remained with minor modifications until typeface's final version.

TypoTechnica 2005, London, 17–19 February

v0.26 *v0.27A3*

Searching for the "a" terminal

Workfile section: 19
Period: 21 to 26 February
Font version: 0.26 and 0.27

Gerry kept on telling me how the terminal on the "a" still looked so square.

Sketched a few shapes, created a handful of fonts with different "a's", and printed them out. With help from classmates chose one of the versions, and changed the letters "c, f, r, s" accordingly.

Greek workshop

Workfile section: 20
Period: 22 February

Gerry's lecture on Greek history and development of Greek typeface design, followed by sketching of Greek letterforms with the typeface's vocabulary of shapes.

Italics workshop

Workfile section: 21
Period: 8 to 10 March

Workshop on the design of italics conducted by Gerard. Aim was to design an "informal" italic (calligraphic strokes but upright). Sketches and Gerard's handout used later while designing Calouste italic.

Adhesiontext v1.0 with new webdesign released internally on 9th March.

v0.28 *Calouste*

Improving the design's performance and first concerns with spacing

Workfile section: 22
Period: 27 February to 5 April
Font version: 0.28 to 0.30

Earliest version (0.28) with overall design closer to final typeface. Gerry complains about the bad spacing. Comparison with Minion without kerning. Several small changes to improve the design at small sizes.

Italy field trip 16th to 24th March.

Adhesiontext released internally with Greek, in .com domain on 3rd April.

Adhesiontext "text engine" updated to by word-length aware and concider word frequency on 14th April.

Capitals reintroduction and failed spacing attempts

Workfile section: 23
Period: 15 to 20 April
Font version: 0.31 and 0.32

Restarted design of capitals with ideas seen in Florence. Lowercase respaced according to Gerard's method. Respaced again with Walter Tracy's method. None of the efforts were good, according to Gerry's critic. Attempted Gerry's spacing method but didn't work either.

Research for spacing method

Workfile section: 24
Period: 20 and 21 April

Study of Minion's spacing and kerning, searching for a pattern. Devised spacing method. Original post in BlackBoard's discussion board:

After trying a few spacing methods with no success, I decided to try what I'm about to share with you here. This method is probably not an outstanding innovation, however I haven't seen anything exactly like it described elsewhere.
I can't guarantee it will work for your font, but I'm able to say that it made miracles on mine, as some of you could attest. Maybe with a few adjustments you can still find it useful. Finally, it goes without saying that, as you'll notice, this is a REALLY tedious process. However the final outcome is most likely to be quite rewarding.
I would also want to add that this procedure might help to dramatically reduce the number of kerning pairs needed (at least that's what happened to me...).

1. I divided the alphabet in 3 groups, namely "bdhilmnopqu", "acefjkrt" and "gsvwxyz", on the assumption that:

a) the space on BOTH sides of each element of the FIRST GROUP can be determined, and relates to the space attributed to at least ONE side of another element of the same group that have a similar shape. (i.e. the space on the RIGHT SIDE of "b" and "p" is the same of "o". Or, the space on the LEFT SIDE of "h" is the same given to the same side of "l".);
b) the space on ONE side of each element of the SECOND GROUP is determined, and is equal to the space given to the elements of the first group with a similar shape (i.e. the space on the LEFT SIDE of "k" is the same given to the same side of "h", despite the fact that the space on the right side has no relation with any character in the 1st group);

c) the space around the elements of the THIRD GROUP does not relate to (more or less) any of the other characters in the alphabet.

2. I spaced "n" and "o", and replicated those amounts (with some adjustments) to the rest of the elements on the FIRST GROUP, always keeping in mind to give the same value to similar/equal shapes.

3. I printed a few test documents with words covered by the character set of the FIRST GROUP, and made the necessary corrections/adjustments.

Note: Here I would like to say that, right in this first trials, it was clear that some of my characters' outlines had to be changed (specially the "o"), because they were "breaking the rhythm".

4. After a *few* other print-outs and tons of corrections, I felt the elements of the FIRST GROUP were acceptably spaced, so it was time to move to the next step.

5. The next step consisted on adding, sequentially, one element of the SECOND GROUP to the FIRST GROUP, and space it against the elements of the FIRST GROUP. This meant generating test documents with the character set "bdhilmnopqua" and space the "a", then "bdhilmnopquc" and space the "c", and so on.

Note: It's most likely that the elements of the FIRST GROUP still need some fine adjustments along the way, which should(?) be replicated to the characters with related shapes.

6. The following step was simply doing the process described above, this time with each element of the THIRD GROUP.

7. Finally, I set a "normal" text and (hopefully) the overall spacing was just about right. Some more fine adjustments, and from this point on was "kerning time"...

PS: To get texts files containing all the words that exist in the "adhesiontext" database for a given character set, feel free to use the following link
http://adhesiontext.com/spacing.htm

Spacing the roman

Workfile section: 25
Period: 20 to 26 April
Font version: 0.33 and 0.34

Sample of prints from the spacing process.

Kerning test (1st run)

Workfile section: 26
Period: 25 April
Font version: 0.35

Kerning tests and comparison with Minion.

Introducing diacritics and starting class-kerning

Workfile section: 27
Period: 24 to 29 April
Font version: 0.35 to 0.37

Diacritics design, size and positioning. First kerning classes created
_kerna: a' aacute agrave acircumflex adieresis atilde aring
_kerne: e' egrave eacute ecircumflex edieresis
_kernA: A' Agrave Aacute Acircumflex Atilde Adieresis Aring
_kernT: T'

Compiling encoding files

Workfile section: 28
Period: 5 May

Compilation of encoding files for Latin and Armenian. Consulted different sources including Gerry's, José's, Adobe's and Microsoft's glyphlists, and Fontlab forum. Consulted first essay for Armenian transliteration characters.
Adhesiontext.com public release on 5th May.
Encoding files posted on BlackBoard on 6th May.

Researching italics

Workfile section: 29
Period: 10 May

Analysis of italics. Slope angles. Differences and similarities between roman and italic: design features, character width, stem width. What makes the two part of the same family?

Introducing italics and starting Armenian

Workfile section: 30
Period: 10 to 15 May
Font version: 0.39

Process from slanted roman to true italic letterforms. Design based on previous sketches from Italics workshop. First experiments with Armenian letterforms. Design model followed was Sylfaen, which is too Latinised.

v0.39 *v0.45*

Jean-François Porchez's workshop

Workfile section: 31
Period: 16 to 20 May
Font version: 0.40 to 0.45 / 0.40it and 0.41it

Five days workshop conducted by Jean-François Porchez. The typeface benefited significantly from this workshop, particularly the roman uppercase and the italic lowercase. The differences in the shapes were often minor, but the overall design became more solid and consistent. The critic and feedback on the letter shapes was directed and easy to decode and implement. The skills and techniques for handling Bezier curves were enhanced.

Hinting workshop with Laurence Penney from 24th to 26th May.

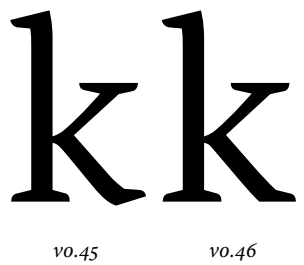
Netherlands field trip from 30th May to 2 June.

v0.39it *v0.41it*

Completing the italic lowercase basic set

Workfile section: 32
Period: 4 June
Font version: 0.42it to 0.44it

Italic lowercase completed. Uppercase is condensed and slanted roman.



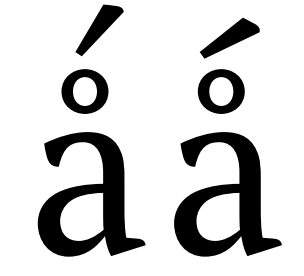
v0.45 *v0.46*

Last Gerard Unger's critic

Workfile section: 33
Period: 5 June
Font version: 0.45 and 0.44it

Gerard suggested changing the legs on the uppercase "K" and "R". Tested the same change on the leg of the lowercase "k" but the letter lost its liveliness. Gerard also suggested removing 5 units of space around the vertical stems, to refine the overall spacing.

Gerry mentioned that the italic looked too light and condensed compared with the roman.



v0.46 *v0.47*

Victor Gaultney's critic on diacritics

Workfile section: 34
Period: 13 and 14 June
Font version: 0.46

Victor Gaultney's lecture on diacritics was instructive and happened at the right time, when I was starting to expand the character set. His critic on the diacritics was also informative.

vo.46it *vo.48it*

Introducing numerals in the roman
Workfile section: 35
Period: 16 to 21 June
Font version: 0.47 and 0.48 / 0.46it to 0.48it

The numerals, started during Jean-François Porchez's workshop, were finalised (appart from the "8").

Several changes were made in the italic, after Gerry's critic.

Testing different printers (2nd run)
Workfile section: 36
Period: 23 June
Font version: 0.48

Tests in the various printers existent in the department.

Armenian samples
Workfile section: 37

Compilation of several Armenian publications and documents.

Fred Africkian *Henrik Mnatsakanyan*

Armenian references
Workfile section: 38

Selection of Armenian calligraphic and typographic references.

Sylfaen *GrqiNor*

Armenian digital references
Workfile section: 39

Collection of commercial and free Armenian fonts.

Armenian sketches
Workfile section: 40
Period: 1 to 12 July

Sketches and calligraphic studies.
Meeting with Susan Pattie from Armenian Institute on the 27th Jun.
First and second meetings with Gagik on the 1st and 6th July.

v0.49 *v0.50*

Developing the Armenian glyphset

Workfile section: 41
Period: 6 to 17 July
Font version: 0.49 to 0.55

Spacing the lowercase Armenian. Testing Armenian transliteration setting. Comparison with Sylfaen. Correcting the design.

Meeting with Gagik and Gerry on the 14th July.

Kerning test (2nd run)

Workfile section: 42
Period: 19 July
Font version: 0.56

Testing and refining the previous kerning.

Editing the OpenType kern feature

Workfile section: 43
Period: 18 to 20 July
Font version: 0.56

Improving and extending the kern feature generated by Fontlab. Addition of kerning exceptions.

v0.56 *Calouste*

Uprighting the Armenian

Workfile section: 44
Period: 27 to 29 July
Font version: 0.56 and Calouste_v02

The initial slope angle of 6 degrees was abandoned after Gagik's critic. Armenian characters slanted back 4 degrees. The diacritics now take a full space width. Ligatures redesigned. Capital letter *tiwn* enlarged according to Gagik's suggestion.

Emulating real documents and testing font files

Workfile section: 45
Period: 14 to 17 July
Font version: 0.54 and 0.55

Setting real documents. Testing different languages. Testing OpenType features. Testing font's behaviour under different systems and applications.

v0.54it *Calouste*

Finishing the italic

Workfile section: 46
Period: 26 and 27 July
Font version: 0.54it to 0.57it

Last changes in the italic. Capitals were light. Capitals were replaced by slightly condensed and slanted roman. Stem widths were corrected. Outlines were cleaned.

Finalising glyphset and production phase

Workfile section: 47
Period: 12 to 30 July
Font version: 0.53 to Calouste_v02

Snapshots of later font versions. Font naming.

Final glyphsets

Workfile section: 48
Period: 2 August
Font version: Calouste-Regular and Calouste-Italic

Calouste-Regular 575 glyphs.
Calouste-Italic 481 glyphs.

Final thought

Writing this Reflexion On Practice document and compiling the Workfile really helped to close a cycle and *wrap up* the practical component of this programme. Looking in perspective now, thanks to these two elements every step taken makes more sense. It is also simpler to see the development's strong points and weaknesses.

The whole process was far from an easy journey, particularly in terms of the workload involved. But, thankfully, it was guided by experienced and wise people, who knew when to *step in*. They helped pushing this project further in many aspects, helped focussing what was starting to get blurry, and often went beyond what they are required to. A especial thanks is owed to Gerry.

Conclusion

Calouste is the corollary of one year long fulfilling experience at Reading, in the Department of Typography and Graphic Communication. It was an extremely enriching trial and error process that always found support from the programme's lecturers, staff members, classmates and external individuals. Like any project, it had its ups and downs, moments of joy and success, and times of frustration and despair. But nevertheless, the final result and knowledge acquired surpass, by a large margin, all the hard work and adversities encountered.

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Fonts used

Body text and captions
Minion Pro, Robert Slimbach

Headings
Dolly, Underware

Illustrations
Calouste, Miguel Sousa