

# VJ18-VF

## Research & development of an international conference brand using Variable Font design space

# ASTEROIDS

PRESS SPACE TO PLAY

### introduction

The goal of this poster is to present development process and the current result of VJ18-VF. An all-caps Variable Font (VF) implementation of a retro looking typeface, mainly inspired by the original vector graphics of the Asteroids arcade game (developed by Atari in 1979, **fig.01**). This font was first developed as a design tool to research and develop a unique brand for the 2018 edition of the international academic conference on sciences and arts of videogames (**fig. 02**).

After deciding on the visual concept, the research for an adequate typeface for the brand proved unsuccessful. Existing typefaces either lacked technical quality (as e.g. Hyperspace by Pixel Sagas), or the visual design was too far from the original graphics, and thus failing to evoke the graphics from the late 1970's visual displays. This was also the case with fonts such as The Foundry Gridnik by David Quay and Freda Sack, or Monotype Kairos Sans by Terrance Weinzierl (**fig. 03**), the latter having an experimental implementation of a 3-axes VF available online, that served as a technical reference. The design of the initial characters —VIDEOJGS—, the minimum required glyphs to design the logo, was done in a traditional way, in Adobe Illustrator (AI). The designer would sketch a few compositions and would present them later to the team. As many designers experience, this can be a slow process, hard to specify, or even agree upon. Feedback is difficult to integrate into the actual design, forcing the team to quickly design new sketches, usually by hand (Bestely & Noble, 2016). This was a particularly complicated aspect on trying to gather consensus in the rules that decide the type system (the angle of the diagonals, the number of intersections, etc). By exploring the current state of the art technology in font design (Hudson, 2016; Pamental, 2017), the team quickly found that opting to work with a 2-axes implementation of a VF — width and weight — in the Glyphs software package would allow for a much faster exploration of the design space of the logo with the team (**fig. 04a**).

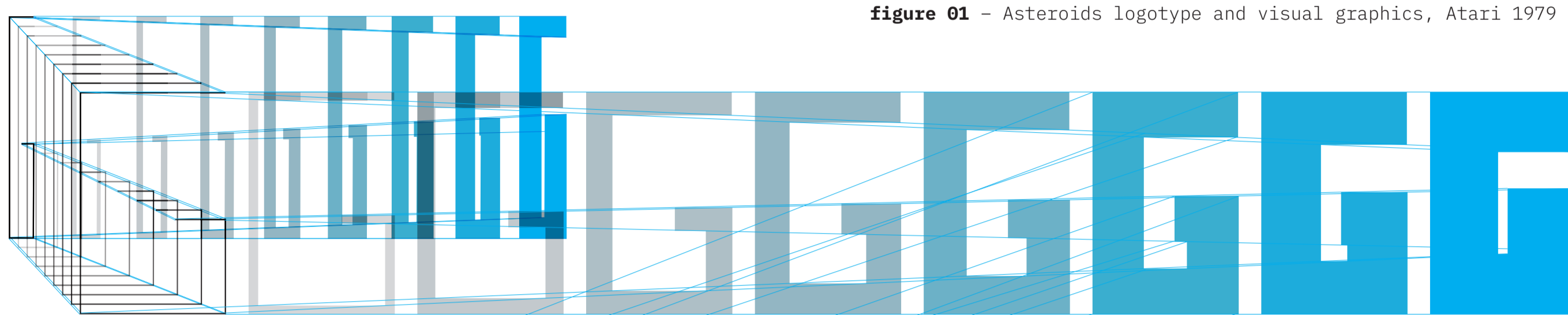


figure 01 – Asteroids logotype and visual graphics, Atari 1979

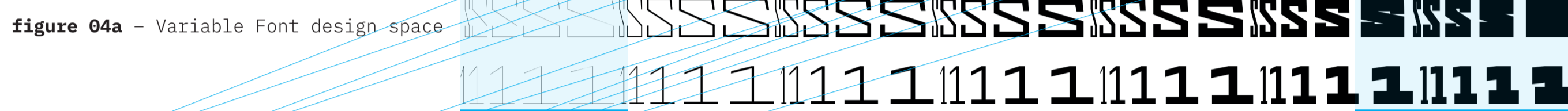


figure 04a – Variable Font design space



figure 04b – Variable Font design extrapolation design spaces (serendipitous design opportunities)

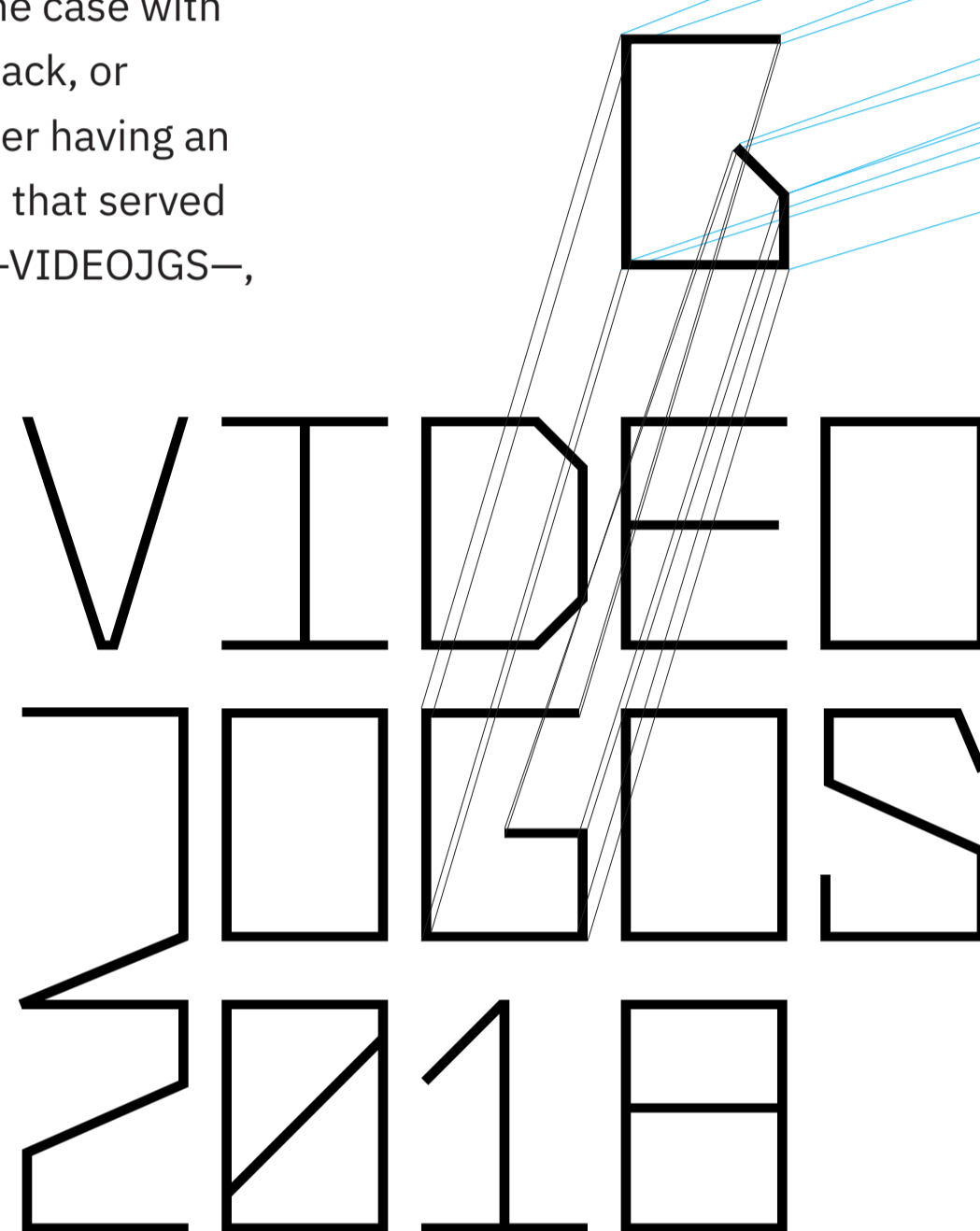


figure 02 – Videojogos 2018 logotype

conference. Especially in the conference website —the font can be easily exported as a Webfont (WOFF2) and used in the early designs. The font was also exported as a VF (GX format) allowing for the full and richer exploration of its design axes —currently not supported in stable releases of the browsers—, one that will progressively enhance the web experience of its users in the future (Pamental, 2016).

The current typeface has all the basic Latin uppercase characters, numerals diacritics and symbols needed for the conference branding and

communication needs (Opentype Std set) in a total 278 glyphs (**fig. 05**). Trying to balance the reference to the original visual inspiration and the artistic and technical output, some glyphs have contextual variants (e.g. G, K, Q) that work better either in text, or display sizes.

HYPERSPACE  
KAIROS SANS  
FOUNDRY GRIDNIK

figure 03 – Initial typeface research candidates: Hyperspace, Kairos Sans and Foundry Gridnik

Letter, Latin					
A	Á	Â	Ä	Å	À
A 0041	Acute 00C1	Acircumflex 00C2	Adieresis 00C4	Agrave 00C0	Aring 00C5
Ã	Æ	B	C	Ç	D
Atilde 00C3	AE 00C6	B 0042	C 0043	Ccedilla 00C7	D 0044
Ð	E	É	Ê	Ë	È
Eth 00D0	E 0045	Eacute 00C9	Ecircumflex 00CA	Ediereis 00CB	Egrave 00C8
F	G	H	I	Í	Î
F 0046	G 0047	H 0048	I 0049	Iacute 00CD	Icircumflex 00CE
Ï	Ì	Ï	K	L	M
Iidieresis 00CF	Igrave 00CC	J 004A	K 004B	L 004C	M 004D
N	Ñ	O	Ó	Ô	Ö
N 004E	Ntilde 00D1	O 004F	Oacute 00D3	Ocircumflex 00D4	Odiereis 00D6
Ï	Ø	Õ	Œ	Œ	Þ
Ograve 00D2	Oslash 00D8	Otilde 00D5	OE 0152	P 0050	Thorn 00DE
Q	R	S	T	U	Ú
Q 0051	R 0052	S 0053	T 0054	U 0055	Uacute 00DA
Û	Ü	Ù	V	W	Ŵ
Ucircumflex 00DB	Udiereis 00DD	Ugrave 00D9	V 0056	W 0057	Wacute 1E82
Ŷ	ÿ	ŷ	X	Y	Ý
Wcircumflex 0174	Wdiereis 1E84	Wgrave 1E80	X 0058	Y 0059	Yacute 00DD
ÿ	ÿ	ÿ	Z	Ɔ	Ɔ
Ycircumflex 0176	Ydiereis 0178	Ygrave 1EF2	Z 005A	B.001	G.001
Ɔ	Ɔ	Ɔ	P	Q	S
J.001	K.001	O.001	P.001	Q.001	S.001
B	G	J	S	G	J
B.002	G.002	J.002	S.002	G.003	J.003
S	G	J			
S.003	G.004	J.004			

figure 05 – Partial character map & alternate characters

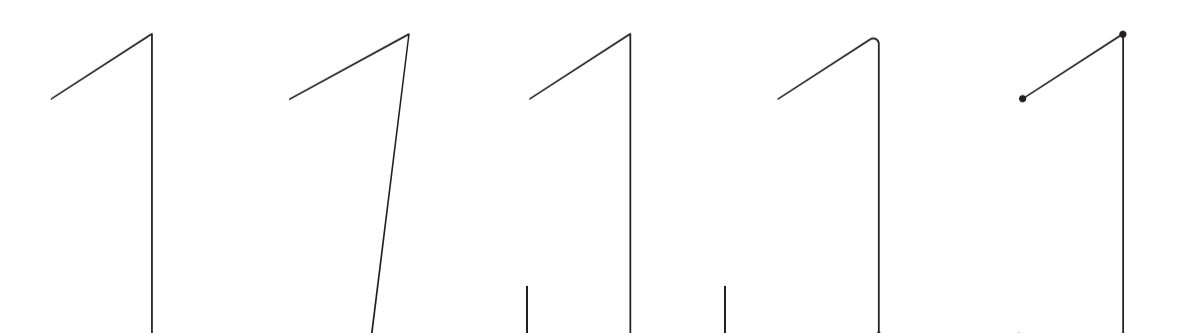


figure 06 – Extra axes: Slant; Serif; Soft; Joint.

### development

Although it required some technical research —some glyphs had to include a brace layer in order to interpolate correctly (Scheichelbauer, 2012, 2014), especially the initial stroke of the numeral “1” and the inside jaw of the “G” (**fig. 2**)— and a slow evolution design of the first characters —the initial design of the 2-axes had to be reconstructed—, using a rapid and iterative prototyping approach drastically reduced the blending operations needed to instantiate the drawings and help the team to decide on the final design (Ratcliffe & McNeil, 2011; Jongerius & Fabrique, 2014). The weight and width design space, as well as some details (as e.g. the jaw of the G, the length of the E arms, and the spur of the S) could be finetuned in real-time during the work meetings, using Glyphs to manipulate the drawing of the masters or the brace layers. Or using Font View and AI 2018 by directly manipulating the VF axes in their interface.

The VJ18-VF was designed to fit with the proportions of the IBM Plex Mono, a typeface designed by Mike Abbink (IBM), Paul van der Laan and Pieter van Rosmalen (Bold Monday) as the support typeface for the text and communication. The drawings were therefore always compared and validated in real-time within its final usage context (logotype and slogan, website landing page, etc.).

The VF design space also allowed for some serendipitous exploration of the design space (Melo & Carvalhais, 2016). The designer specified the extremes of the axes (e.g. 250–900), but the extrapolation of the values (e.g. 50–1200, **fig. 04b** in blue space) of the exploration of new design opportunities. This allowed for the discovery of a much thinner weight (30 em units) than anticipated in the static design (50 em units).

Choosing to develop the logotype as a font also allowed for the opportunity to quickly prototype and explore the possibility of expanding the character set to a full uppercase set. This allowed to better integrate the brand identity in the full communication materials spectrum of the

### future work

Besides width & weight, four extra axes are being developed: Slant (italic); Serif (slab lines); Soft (round corners); and Joint (intersection dots) are being added to the typeface (**fig. 06**).

### conclusion

By presenting VJ18-VF as a case study of the development of a logotype by means of a VF, we expect the contributions of this poster to be two-fold: on the one hand to promote the use and development of Variable Fonts within the design and academic community alike; and on the second hand to promote the use of these technologies as a real-time communication tool for teams. The initial time and technical investment is higher —in our case it doubled the number of hours needed for the first designs—, but it proved to have a greater value not only by allowing for a finer communication and feedback, but also revealed new unpredicted directions in the design.

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ENCONTRO DE TIPOGRAFIA  
TYPOGRAPHY MEETING



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