

## inspiration

This exercise looks back to the 1910s and 1920s, when avant-garde designers made experimental typefaces out of simple geometric parts. (*GeometricFonts.pdf*)

Modality often restricts and channels the form of design. Early computers used bitmapped fonts due to the limitations of technology. Bitmap typefaces are built out of the pixels that structure a screen display or other output device. Instead of using typefaces for print that looked crappy on screen, early designers embraced the limitation of stair-stepped, bitmapped fonts..

This exercise also speaks to the structure of digital technologies, from cash register receipts and LED signs to on-screen font display, showing that a typeface is a system of elements. Contemporary type designers like to exploit the visible geometry of pixelated characters.

(*Thinking With Type*, pg. 74)

### student examples



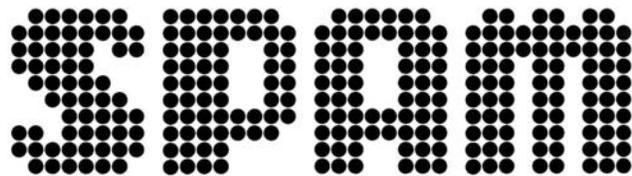
Becky Slogeris



Bryan Connor



Virginia Sasser



Julia Kim



Michelle Ghiotti

In fact, a bitmapped font, by design, and not restriction is one of the 100 most popular fonts of all time. (*PToT.pdf*)

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### student examples



Wendy Neese



Brendon McClean



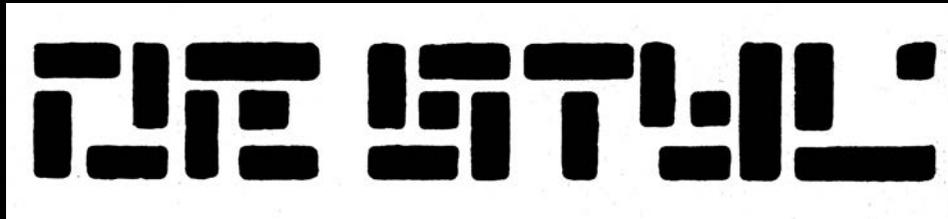
James Alvarez



Joey Potts



Bruce Willen



This logo for the Dutch avant-garde journal De Stijl was designed by Vilmos Huszar in 1917. The letters consist of pixel-like blocks.



Theo van Doesburg, founder of the De Stijl movement in the Netherlands, created this alphabet using only perpendicular elements in 1919.

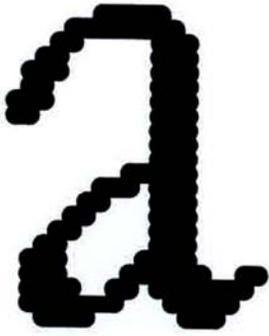
abcdefghijklmnopqrstuvwxyz  
a d d

Herbert Bayer designed universal, consisting of only lowercase letters constructed with circles and straight lines, at the Bauhaus in 1925



## TYPE AS PROGRAM

Responding in 1967 to the rise of electronic communication, the Dutch designer Wim Crouwel published designs for a “new alphabet” constructed from straight lines. Rejecting centuries of typographic convention, he designed his letters for optimal display on a video screen (CRT), where curves and angles are rendered with horizontal scan lines. In a brochure promoting his new alphabet, subtitled “An Introduction for a Programmed Typography,” he proposed a design methodology in which decisions are rule-based and systematic.



WIM CROUWEL presented this “scanned” version of a Garamond a in contrast with his own new alphabet, whose forms accept the gridded structure of the screen. See Wim Crouwel, *New Alphabet* (Amsterdam: Total Design, 1967).

ZUZANA LICKO created coarse-resolution fonts for desktop screens and printers in 1985. These fonts have since been integrated into Emigre’s extensive Lo-Res font family, designed for print and digital media.

See Rudy VanderLans and Zuzana Licko, *Emigre: Graphic Design into the Digital Realm* (New York: Van Nostrand Reinhold, 1993) and *Emigre No. 70: The Look Back Issue, Selections from Emigre Magazine, 1984–2009* (Berkeley: Gingko Press, 2009).

J b c d e f g h i L j t L g n o p q r s  
t u v u i y z ü

In the mid-1980s, personal computers and low-resolution printers put the tools of typography in the hands of a broader public. In 1985 Zuzana Licko began designing typefaces that exploited the rough grain of early desktop systems. While other digital fonts imposed the coarse grid of screen displays and dot-matrix printers onto traditional typographic forms, Licko embraced the language of digital equipment. She and her husband, Rudy VanderLans, cofounders of Emigre Fonts and *Emigre* magazine, called themselves the “new primitives,” pioneers of a technological dawn.

Emperor Oakland Emigre

By the early 1990s, with the introduction of high-resolution laser printers and outline font technologies such as PostScript, type designers were less constrained by low-resolution outputs. While various signage systems and digital output devices still rely on bitmap fonts today, it is the fascination with programmed, geometric structures that has enabled bitmap forms to continue evolving as a visual ethos in print and digital media.

**Living with computers gives funny ideas. — WIM CROUWEL, 1967**

# NEU ALPHABET

UNE  
possibilité  
pour  
l'ne  
neuf  
développement

een  
mogelijkheid  
voor  
de  
nieuwe  
ontwikkeling

UNE  
possibilité  
pour  
le  
développement  
nouveau

EINE  
Möglichkeit  
für  
die  
neue  
Entwicklung

AN  
Introduction  
par  
A  
progr. joned  
typogr. aphv

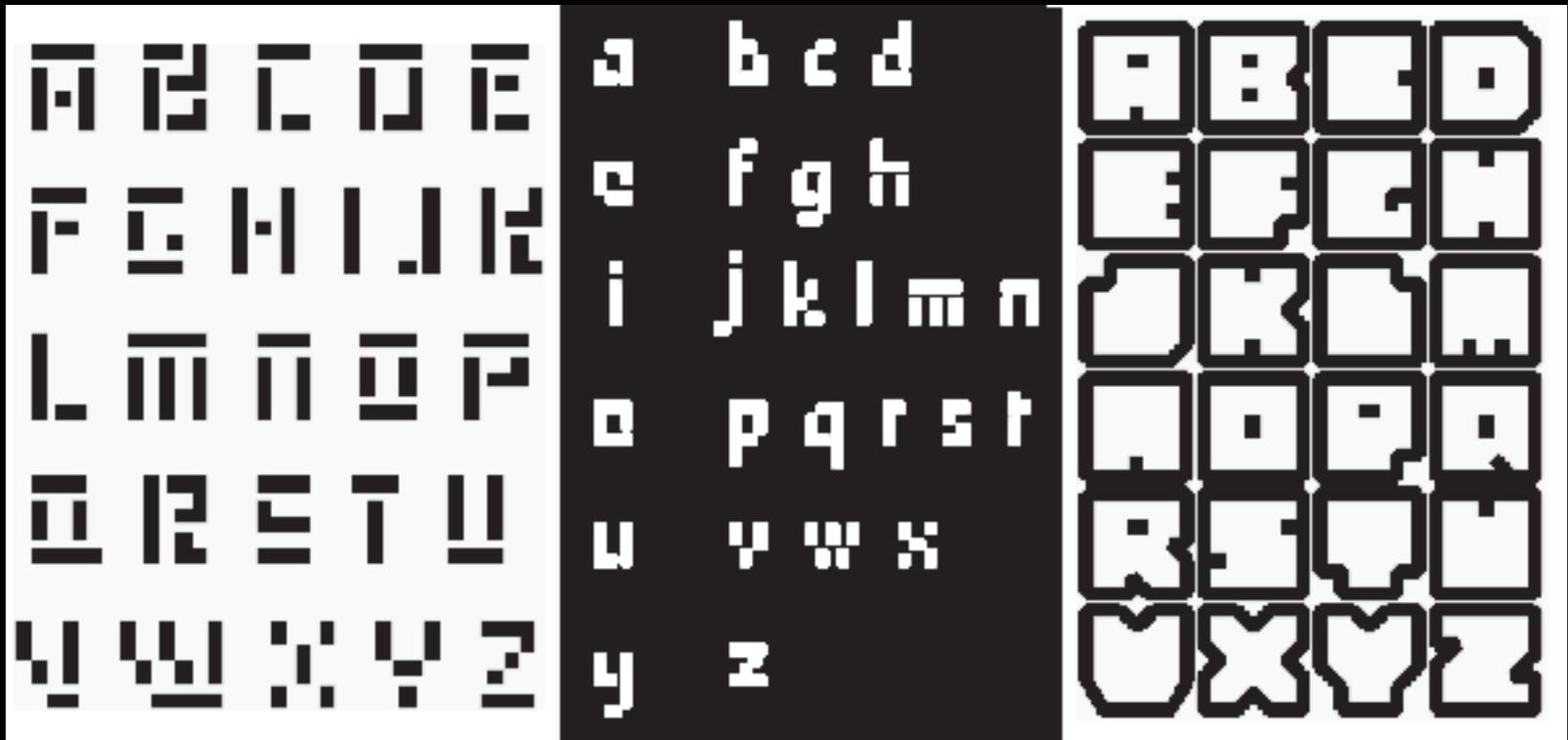
**Lo-Res Family** designed by Zuzana Licko for Emigre, 1985

## **Family Credo?**

A MATRIX IS NOTHING TO BE ASHAMED OF.

**A matrix is nothing to be ashamed of.**

**A MATRIX IS NOTHING TO BE ASHAMED OF!**



The French designer Philippe Apeloig created these contemporary variations on reduced, geometric typefaces.

## *task*

Create a prototype for a bitmap typeface by designing letters on a grid of squares and/or a grid of dots. Substitute the curves and diagonals of traditional letterforms with gridded and rectangular elements. Avoid making detailed "staircases" which are just curves and diagonals in disguise.

An entire alphabet is not necessary. Your own initials, or something like 5 - 8 characters in both analog and digital form is adequate for your prototype. (10-16 letters total)

**1. Create 5-8 custom letterforms.** Start with a sheet of grid paper (provided) and use the modular squares to build your custom bitmap font. (In this case pixelization is a good thing, but it's never fuzzy!) Scan this into the computer and use it as a basis for creating a digital version.

This is an *additive* technique.

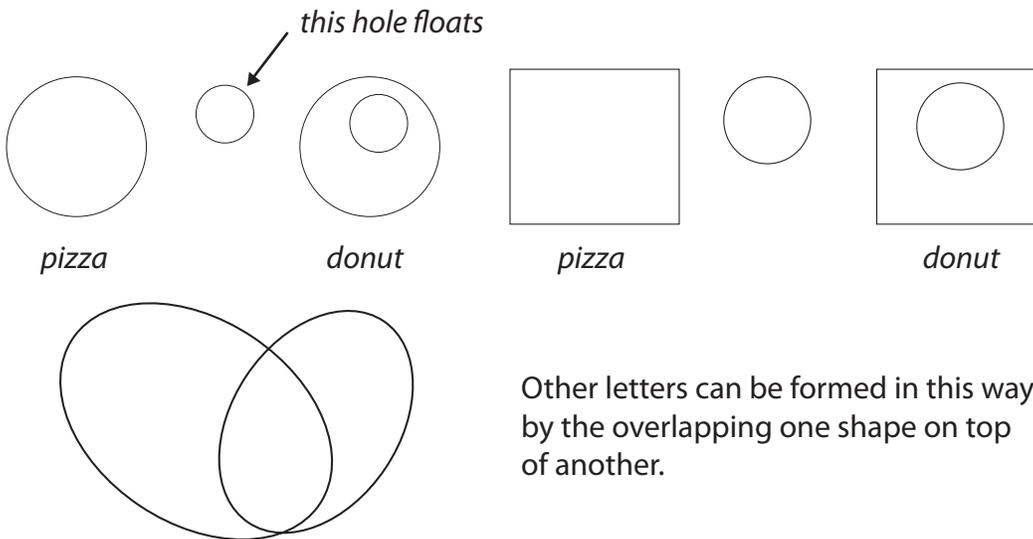
**2. Create 5-8 more custom letterforms.** Now take what you have drawn on paper and translate that into digital form, using Compound Paths, Pathfinder, and other tools to create them, this time using Illustrator. (*diagram\_dots.pdf*)

This is both a *subtractive* and *additive* technique, like chipping away at a block of marble, starting with a shape and then poking holes and taking bites out, then fusing pieces back on to create letterforms.

(Bitmapped type samples are one of the forms you will need to gather for your type samples page for the Final Project)

## technique

**Compound Paths** If you wanted to make an “O,” you can start with a circle or a square and poke a hole in it to make a compound path. *Pizza becomes donut.* Just place the shape you want to cut out with on top, select both objects and Object>Compound Path>Make (or just R click). Bear in mind the hole is 'live' until you expand it (Object>Expand), so feel free to move it around.

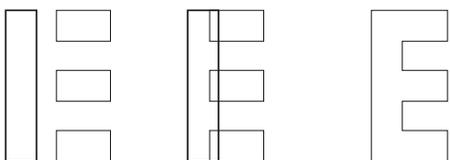


Explore also with *Object>Path>Divide Objects Below* and *Object>Path>Outline Stroke* and *Object>Expand* you'll be able to add and subtract simple shapes to create custom letterforms.

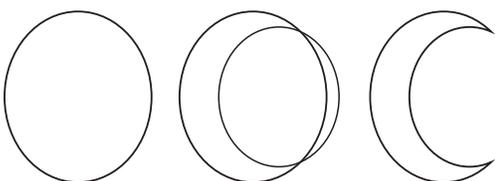


**Pathfinder** Use the Pathfinder Panel and Shape Builder Tool to both construct and deconstruct custom letter forms.

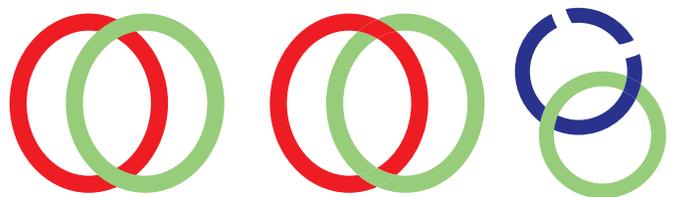
*Pathfinder>Unite* joins separate pieces together.



*Pathfinder>Minus Front* eclipses a crescent shape “C”.



*Pathfinder>Divide* slices into separate objects anywhere it overlaps.



Explore using other Pathfinder Tools, like *Intersect* and *Exclude*.