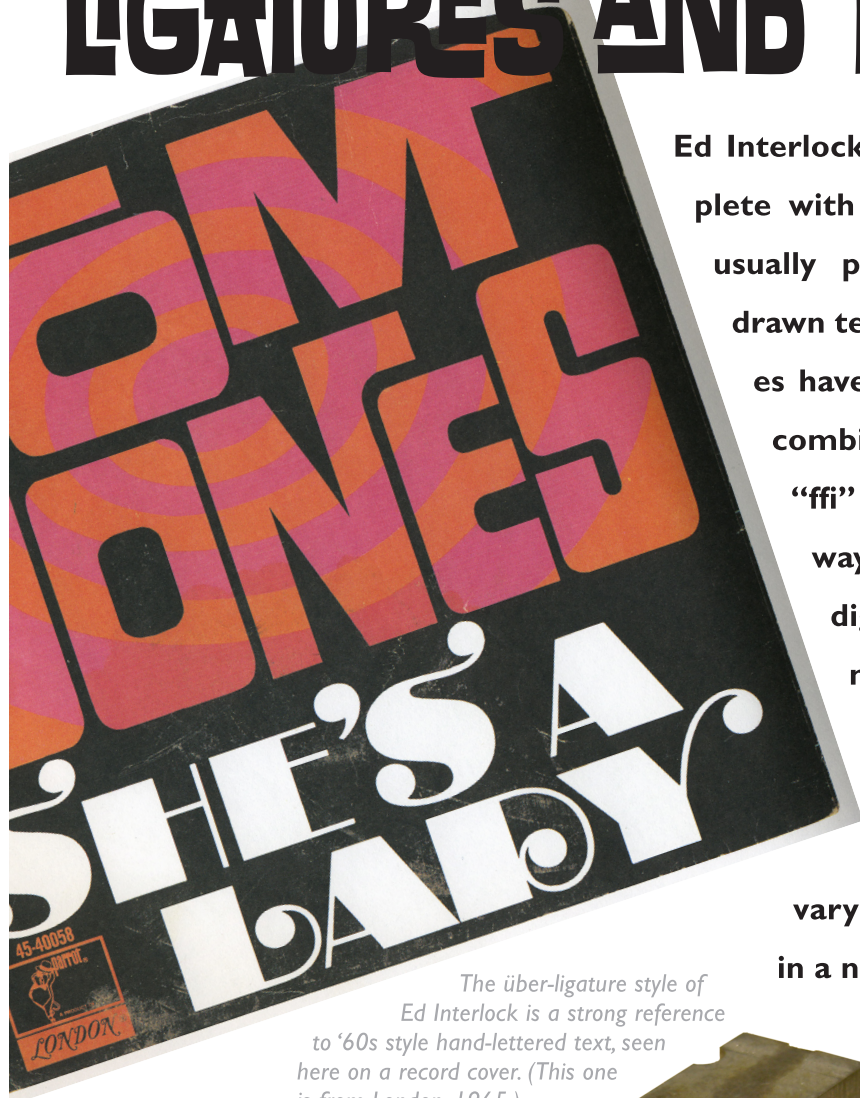


ED INTERLOCK

LIGATURES AND TECHNOLOGY



The über-ligature style of Ed Interlock is a strong reference to '60s style hand-lettered text, seen here on a record cover. (This one is from London, 1965.)

Ed Interlock is a headline font, replete with ligatures to a degree usually present only in hand-drawn text. Frequently, typefaces have a few ligatures—such as “ff” and “ffi” usually show up, all the way from lead typefaces to digital fonts—but as its name suggests, Interlock goes far beyond a mere few, and has extra programming to vary high and low ligatures in a natural, wavy pattern.



As well as amazing technology, Interlock provides a sense of humor: the above is a glyph from the font. There is also a separate Ed Benguiats font.

Below and left, two ligatures in lead from 36pt Century Schoolbook bold.



RLOCK

Ed Benguiat designed the first version of Interlock while working for PLINC (Photo Lettering, Inc.), which he joined in the 60s. In the 80s, PLINC went out of business, and in 2003, House Industries, jointly with a few others, acquired PLINC's expansive library; it had been sitting unused in a warehouse since the rise to dominance of digital type. Ken Barber of House Industries worked with Benguiat to convert Ed Interlock and several other of his photographic alphabets into digital fonts.

PHOTO-LETTERING HOUSE & BENGUIAT

Photo lettering—Ed Interlock's natal form—was a major but oft-overlooked step in the development from lead to digital. It allowed not only overlapping letterforms but, through use of lenses, scaling and distortion. The process of setting type with photo-lettering, however, was far from the easy (and often careless) process afforded by digital fonts; in an interview with House Industries, Ed Benguiat recalls that it cost around five dollars a word. Given the price, putting down letterforms had to be done with exacting attention—trial and error wasn't feasible.

Despite seemingly nostalgic recollection of the days when typography was limited to those who cared, however, Ed Benguiat is positive about the digital medium which allows the user to “blow it up” (Benguiat's disparaging term), for better or for worse, and even pushed for the transition when PLINC didn't think computers were the right progression. Beyond simple ease of putting letters together, though, digital type has developed tools to aid in more complex typography; not only the “kerning program” that Benguiat laments the user's lack of attention to, but complex treatment of alternate glyphs and ligatures. This is where House Industries and OpenType come in.



In photo-lettering (here with Interlock), letterforms are projected, from a negative onto a photographic medium. Two prisms and a lens can transform the letterform. Diagram from Print magazine March/April 2005.

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OpenType is one of the latest and greatest digital font formats. As well as being cross-platform and supporting unicode, it offers alternate characters and contextual glyph substitution.

At left are a sampling of Ed Interlock's myriad glyphs, which are used in contextual substitutions.

Some of Zapfino's alternate letterforms and ligatures (right): it has both fancy ligatures—including one giant 'ligature' for its name—and standard ligatures, such as the adjustment of to tail on the 'o' when followed by 'u'.



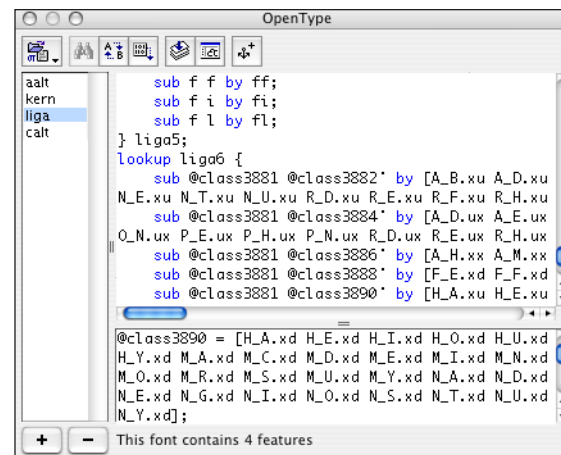
The Arabic letter FEH, set normal (above), and then in its initial, medial, final, and isolated forms. The font is STSong Regular.

RULES AND CLASSES

For such writing systems as Arabic, this is essential for accuracy; for English it's essential for aesthetic satisfaction and overall coolness. What it means, in any context, is that a letter can look different at the beginning, middle, or end of a word, or when standing by itself; and that a sequence of individual letterforms when combined can look different from the originals together.

In the intricacies of OpenType, developed jointly by Microsoft and Adobe in 1998, this boils down to relatively simple programming. For example, in a script font, the designer can say 'if there's a letter that usually connects low, and then one that connects high, change one so that they both connect high.'

OP



In FontLab (as seen on MacOS X at left), OpenType ligatures and contextual substitutions show up as programming-like rules. Here we see definitions of various classes of ligatures, and rules for replacements when a ligature from one class follows a ligature from another.

In Ed Interlock, this translates to upwards of a thousand ligatures (fleshed out from Benguiat's photographic alphabet by Ken Barber), and then code (by Tal Leming) beyond that to vary the positioning of the ligatures (high or low) to achieve a more natural look. The first is easy to grasp—if stunning in sheer volume of glyphs—in that it's simple substitution of 'i', 'n', 't' with the special 'int' glyph. The second can be extrapolated from the script-connection example; if a high-ligature is followed by another high-ligature, change the second to a low-ligature. Best of all, the process is transparent to the user, to the point of glyphs composed (conceptually) of multiple characters having caret-insertion points so the user needn't be bothered with their presence at all.

ENTYPE

The result is a digital font that combines ease of use with a hand-drawn look, using the the latest techniques in what House deservedly calls Artificial 'Ed'telligence.

For example, note the rule in the top section that starts "sub @class3881". This means when a class-3881 is followed by a class-3890, substitute the latter for its listed alternate.

PE + NG = PENG
3881 3890 N_G.xu

PE P_E.dx
@class3881
PE P_E.ux
NG N_G.xd
NG N_G.xu
@class3890

INTERLOCK
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