A

Array

Designed By James Hultquist-Todd
4 Weights
3 Widths
Designed in 2019

Edinburg

Regular

Grenoble

Bold

Tauranga

Black

Rancagua

Regular Italic

Palm Bay

Bold Italic

Quanzhou

Black Italic

JTD

CAGLIARI

Regular

WINNIPEG

Bold

KASUKABE

Black

LAUSANNE

Regular Italic

JEONGEUP

Bold Italic

ROCKFORD

Black Italic

JTD

Ichikawa

Regular

Fujisawa

Bold

Winnipeg

Black

Mandsaur

Regular Italic

Escuintla

Bold Italic

Jayapura

Black It

JTD

Array was designed specifically to bring several disparate ideas together. Can a typeface work for coding and regular text? Can Renaissance ideas be combined with the normally austere styles of monospace type? Array is two typefaces in one: a monospaced family designed to take the necessities of coding into account, and a text typeface which carries a bit of that typewriter manuscript charm with it.

In order to accomplish this duality, a system of widths was devised into which all of the characters would conform. This was easy enough for the monospace—everything would have the same widths— for the proportional variant, however, things had to get a bit more complicated. The original width was divided into thirds. Then, two new widths were selected—1⅓ and ⅔. Only two styles were chosen in order to keep some of the monospace charm in this new variation.

This meant that there were three widths to choose from. Characters like the "I", "l", "t", "r", "f", "j" and so on, along with much of the punctuation, would fit into the ⅔ slot. The "M", "W", "w" and a few others would fit in the 1⅓ box. Where this started to get interesting was with the design of the italics.

Renaissance italics tend to be much narrower than their upright counterparts. Look at the "o" in Adobe Garamond, the italic "o" is about 30% narrower than the upright. What this meant for Array was some characters in the proportional version which are the same width in the monospaced style were narrowed for the italic. This was not taken as extreme as it could have, in order to again maintain some of the monospace feel.

The italics also feature a few of what are commonly considered "swashed" capitals. This was done to help the monospaced italic differentiate itself when used in coding. The swashed features were made a little less flamboyant than what is traditionally drawn in order to make all-capital usage possible.

The actual letterforms of Array are not based on any one particular Renaissance model but on the genré as a whole. As the design is a monospace, some considerations had to be made, serifs had to be bulked up, otherwise, the width of the "I" would leave a gaping hole in the text. This need to bulk everything up led to the initial drawings being made not with a traditional broad nib pen, but with a brush pen.

In order to imbue the design with a bit more life and character than the traditional monospace, the brush pen was used as model. While not traditionally (if ever) used to draw Renaissance type, it lends a hand-drawn element and liveliness to the overall feel of the text while still allowing the typeface to perform its primary function(s) without distraction.

Proportional Regular 8/10 pt

0123456789　　　　　　　0123456789

Oldstyle Figures

0123456789　　　　　　　01234/56789

Superior/Inferior

0123456789　　　　　　　01234/56789

Numerator/Denominator

EFLQY　　　　　　　　　*EFLQY*

Stylistic Set 1

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Lowercase

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Numerals and Currency

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Fractions and Mathematical Symbols

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Punctuation

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Symbols, Arrows, and Dingbats

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Numerals and Currency

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Fractions and Mathematical Symbols

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Punctuation

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Symbols, Arrows, and Dingbats

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Uppercase

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Numerals and Currency

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Fractions and Mathematical Symbols

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Punctuation

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Symbols, Arrows, and Dingbats

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Uppercase

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Lowercase

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" " ' ' , „ " ' · . , … : ; ! ? • *&¶§†‡*

Punctuation

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Symbols, Arrows, and Dingbats

```
if "-A" not in sys.argv:
    # make sure the external tools have the correct permissions
    externalTools = ("ffmpeg", "gifsicle", "mkbitmap", "potrace")
    for externalTool in externalTools:
        externalToolPath = os.path.join(resourcesPath, externalTool)
        os.chmod(externalToolPath, 0o775)

    # See:
    # https://bitbucket.org/ronaldoussoren/py2app/issues/256/fs-module-not-fully-working-from-app
    # https://github.com/PyFilesystem/pyfilesystem2/issues/228
    for pkgName in ["fs", "appdirs", "pytz", "six", "setuptools"]:
        infoPath = pkg_resources.get_distribution(pkgName).egg_info
        baseInfoName = os.path.basename(infoPath)
        shutil.copytree(infoPath, os.path.join(pythonLibPath, baseInfoName))

if runTests:
    appExecutable = os.path.join(appLocation, "Contents", "MacOS", appName)
    runAllTestsPath = os.path.join(drawBotRoot, "tests", "runAllTests.py")
    commands = [appExecutable, "--testScript=%s" % runAllTestsPath]
    print("Running DrawBot tests...")
    process = subprocess.Popen(commands, stdout=subprocess.PIPE, stderr=subprocess.STDOUT, universal_
newlines=True)
    stdout, stderr = process.communicate()
    lines = stdout.splitlines()
    for startTestOutputIndex, line in enumerate(lines):
        if line.endswith(" starting test script"):
            break
    if startTestOutputIndex != 0:
        print("*** UNEXPECTED OUTPUT BEFORE TEST OUTPUT ***")
        for line in lines[:startTestOutputIndex]:
            print(line)
        print("*** UNEXPECTED OUTPUT BEFORE TEST OUTPUT ***")
```

Mono Regular/Italic 7/9 pt

```
$firstOptional = PHP_INT_MAX;
if (!$isHost) {
    for ($i = \count($tokens) - 1; $i >= 0; --$i) {
        $token = $tokens[$i];
        // variable is optional when it is not important and has a default value
        if ('variable' === $token[0] && !($token[5] ?? false) && $route->hasDefault($token[3])) {
            $firstOptional = $i;
        } else {
            break;
        }
    }
}
// compute the matching regexp
$regexp = '';
for ($i = 0, $nbToken = \count($tokens); $i < $nbToken; ++$i) {
    $regexp .= self::computeRegexp($tokens, $i, $firstOptional);
}
$regexp = self::REGEX_DELIMITER.'^'.$regexp.'$'.self::REGEX_DELIMITER.'sD'.($isHost ? 'i' : '');
// enable Utf8 matching if really required
if ($needsUtf8) {
    $regexp .= 'u';
    for ($i = 0, $nbToken = \count($tokens); $i < $nbToken; ++$i) {
        if ('variable' === $tokens[$i][0]) {
            $tokens[$i][4] = true;
        }
    }
}
return [
    'staticPrefix' => self::determineStaticPrefix($route, $tokens),
    'regex' => $regexp,
    'tokens' => array_reverse($tokens),
    'variables' => $variables,
];
```

Mono Regular/Italic 9/11 pt

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if "-A" not in sys.argv:
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    externalTools = ("ffmpeg", "gifsicle", "mkbitmap", "potrace")
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```

Mono Regular/Italic 9/11 pt

There is an occasional star, like *chi Carinae,* whose spectrum consists almost wholly of bright lines, in general bearing no apparent relationship to the bright lines in the spectra of the gaseous nebulae except that the hydrogen lines are there, as they are almost everywhere. There is reason to believe that such a spectrum indicates the existence of a **very extensive** and **very hot atmosphere** surrounding the main body, or core, of the star in question. This particular star is remarkable in that it has undergone great changes in brilliancy and is located upon a background of nebulosity. The chances are strong that the star has ***rushed through the nebulosity*** with high rate of speed and that the resulting bombardment of the star has expanded and intensely heated its atmosphere.
There are the Wolf-Rayet stars, named from the French astronomers who discovered the first three of this class, whose spectra show a great variety of combinations of continuous spectrum and bright bands. We believe that the continuous spectrum in such a star comes from the more condensed central part, or core, and that the bright-line light proceeds from a hot atmosphere extending far out from the core.
The great majority of the stars have spectra which are continuous, except for the presence of dark or absorption lines: a few lines in the very blue stars, and an increasing number of lines as we pass from the blue through the yellow and red stars to those which are extremely red.

Mono Regular/Italic/Bold/Bold Italic 7/9 pt

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Secchi in the late 60's classified the spectra of the brighter stars, according to the absorption lines in their spectra, into Types I, II III and IV, which correspond: Type I, to the very blue stars, such as *Spica* and *Sirius;* Type II, to the yellow stars similar to our Sun; Type III, to the red stars

Proportional Regular/Italic/Bold/Bold Italic 7/9 pt

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Mono Regular/Italic/Bold/Bold Italic 9/11 pt

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There are the Wolf-Rayet stars, named from the French astronomers who dis-

Mono Regular/Italic/Bold/Bold Italic 10/12 pt

There is an occasional star, like *chi Carinae,* whose spectrum consists almost wholly of bright lines, in general bearing no apparent relationship to the bright lines in the spectra of the gaseous nebulae except that the hydrogen lines are there, as they are almost everywhere. There is reason to believe that such a spectrum indicates the existence of a **very extensive** and **very hot atmosphere** surrounding the main body, or core, of the star in question. This particular star is remarkable in that it has undergone great changes in brilliancy and is located upon a background of nebulosity. The chances are strong that the star has ***rushed through the nebulosity*** with high rate of speed and that the resulting bombardment of the star has expanded and intensely heated its atmosphere.
There are the Wolf-Rayet stars, named from the French astronomers who discovered the first three of this class, whose spectra show a great variety of combinations of continuous spectrum and bright

Proportional Regular/Italic/Bold/Bold Italic 10/12 pt

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Mono Regular/Italic/Bold/Bold Italic 12/14 pt

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whose spectrum consists almost wholly of bright
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nebulae except that the hydrogen lines are there,
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ence of a **very extensive** and **very hot atmosphere**
surrounding the main body, or core, of the star
in question. This particular star is remarkable in
that it has undergone great changes in brilliancy
and is located upon a background of nebulosity.
The chances are strong that the star has *rushed
through the nebulosity* with high rate of speed and
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panded and intensely heated its atmosphere.
There are the Wolf-Rayet stars, named from the
French astronomers who discovered the first three
of this class, whose spectra show a great variety

Mono Regular/Italic/Bold/Bold Italic 14/16

There is an occasional star, like *chi Carinae,* whose
spectrum consists almost wholly of bright lines, in gen-
eral bearing no apparent relationship to the bright lines
in the spectra of the gaseous nebulae except that the hy-
drogen lines are there, as they are almost everywhere.
There is reason to believe that such a spectrum indi-
cates the existence of a **very extensive** and **very hot at-
mosphere** surrounding the main body, or core, of the star
in question. This particular star is remarkable in that it
has undergone great changes in brilliancy and is located
upon a background of nebulosity. The chances are strong
that the star has *rushed through the nebulosity* with high
rate of speed and that the resulting bombardment of the
star has expanded and intensely heated its atmosphere.
There are the Wolf-Rayet stars, named from the French
astronomers who discovered the first three of this class,
whose spectra show a great variety of combinations of
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Proportional Regular/Italic/Bold/Bold Italic 14/16

There is an occasional star, like *chi Cari-nae,* whose spectrum consists almost wholly of bright lines, in general bearing no apparent relationship to the bright lines in the spectra of the gaseous nebulae except that the hydrogen lines are there, as they are almost everywhere. There is reason to believe that such a spectrum indicates the existence of a **very extensive** and **very hot atmosphere** surrounding the main body, or core, of the star in question. This particular star is remarkable in that it has undergone great changes in brilliancy and is located upon a background of nebulosity. The chances are strong that the star has ***rushed through the nebulosity*** with high

Mono Regular/Italic/Bold/Bold Italic 16/18

There is an occasional star, like *chi Carinae,* whose spectrum consists almost wholly of bright lines, in general bearing no apparent relationship to the bright lines in the spectra of the gaseous nebulae except that the hydrogen lines are there, as they are almost everywhere. There is reason to believe that such a spectrum indicates the existence of a **very extensive** and **very hot atmosphere** surrounding the main body, or core, of the star in question. This particular star is remarkable in that it has undergone great changes in brilliancy and is located upon a background of nebulosity. The chances are strong that the star has ***rushed through the nebulosity*** with high rate of speed and that the resulting bombardment of the star has expanded and intensely heated its atmosphere.

Proportional Regular/Italic/Bold/Bold Italic 16/18