## Hyphenation Exception Log

Below is a list of words that $\mathrm{T}_{\mathrm{E}} \mathrm{X}$ fails to hyphenate properly. It last appeared in Volume 6, No. 3, on page 121. Everything listed there is repeated here.

The first column gives results from TEX's \showhyphens\{...\}; entries in the second column are suitable for inclusion in a \hyphenation $\{.$. \} list.

In most instances, inflected forms are not shown for nouns and verbs; however, all forms should be specified in a \hyphenation $\{\ldots\}$ list if they might occur in your document.

| academy | acad-e-my |
| :--- | :--- |
| al-ge-brais-che | al-ge-brai-sche |
| anal-yse | an-a-lyse |
| anomaly | anom-aly |
| anti-nomy(ies) | an-tin-o-my(ies) |
| ap-pendix | ap-pen-dix |
| asymp-totic | as-ymp-tot-ic |
| at-mo-sphere | at-mos-phere |
| ban-dleader | band-leader |
| Be-di-enung | Be-die-nung |
| be-haviour | be-hav-iour |
| bib-li-ographis-che | bib-li-o-gra-phi-sche |
| bid-if-fer-en-tial | bi-dif-fer-en-tial |
| bornolog-i-cal | bor-no-log-i-cal |
| Brow-n-ian | Brown-ian |
| buz-zword | buzz-word |
| cartwheel | cart-wheel |
| cholesteric | cho-les-teric |
| database | data-base |
| dat-a-p-ath | data-path |
| de-mos | demos |
| dis-tribute | dis-trib-ute |
| Di-jk-stra | Dijk-stra |
| dy-namis-che | dy-na-mi-sche |
| elec-trome-chan-i-cal | electro-mechan-i-cal |
| elec-tromechanoa-cous-tic |  |
|  | electro-mechano-acoustic |
| En-glish | Eng-lish |
| equiv-ari-ant | equi-vari-ant |
| Eu-le-rian | Euler-ian |
| ex-traor-di-nary | ex-tra-or-di-nary |
| fermions | fermi-ons |
| flowchart | flow-chart |
| funk-t-sional | funk-tsional |
| Gaus-sian | Gauss-ian |
| ge-o-met-ric | geo-met-ric |
| gnomon | gno-mon |
| Greif-swald | Greifs-wald |
| Grothendieck | Grothen-dieck |
| Grundlehren |  |
|  | Grund-leh-ren |
|  |  |


| Hamil-to-nian | Hamil-ton-ian |
| :---: | :---: |
| Her-mi-tian | Her-mit-ian |
| hex-adec-i-mal | hexa-dec-i-mal |
| holon-omy | ho-lo-no-my |
| ho-mo-th-etic | ho-mo-thetic |
| id-iosyn-crasy | idio-syn-crasy |
| in-fras-truc-ture | in-fra-struc-ture |
| Japanese | Japan-ese |
| jeremi-ads | je-re-mi-ads |
| Kadomt-sev | Kad-om-tsev |
| Ko-rteweg | Kor-te-weg |
| Leg-en-dre | Le-gendre |
| Le-ices-ter | Leices-ter |
| Lip-s-chitz(ian) | Lip-schitz(-ian) |
| macroe-co-nomics | macro-eco-nomics |
| manuscript | man-u-script |
| marginal | mar-gin-al |
| Marko-vian | Mar-kov-ian |
| Mas-sachusetts | Mass-a-chu-setts |
| met-a-lan-guage | meta-lan-guage |
| mi-croe-co-nomics | micro-eco-nomics |
| mi-crofiche | mi-cro-fiche |
| mis-ogamy | mi-sog-a-my |
| mod-elling | mod-el-ling |
| mo-noen-er-getic | mono-en-er-getic |
| monopole | mono-pole |
| monos-pline | mono-spline |
| monos-trofic | mono-strofic |
| mul-ti-pli-ca-ble | mul-ti-plic-able |
| ne-ofields | neo-fields |
| Noethe-rian | Noe-ther-ian |
| none-mer-gency | non-emer-gency |
| nonequiv-ari-ance | non-equi-vari-ance |
| noneu-clidean | non-euclid-ean |
| non-i-so-mor-phic | non-iso-mor-phic |
| nonpseu-do-com-pact | non-pseudo-com-pact |
| non-s-mooth | non-smooth |
| No-ord-wi-jk-er-hout | Noord-wijker-hout |
| parabolic | par-a-bol-ic |
| parametrized | pa-ram-e-trized |
| paramil-i-tary | para-mil-i-tary |
| phe-nomenon | phe-nom-e-non |
| Poincare | Poin-care |
| polyene | poly-ene |
| poly-go-niza-tion | polyg-on-i-za-tion |
| poroe-las-tic | poro-elas-tic |
| postam-ble | post-am-ble |
| Po-ten-tial-gle-ichung pream-ble | Po-ten-tial-glei-chung pre-am-ble |
| pseu-dod-if-fer-en-tial |  |
|  | pseu-do-dif-fer-en-tial |
| pseud-ofi-nite | pseu-do-fi-nite |
| pseud-ofinitely | pseu-do-fi-nite-ly |
| pseud-o-forces | pseu-do-forces |

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pseu-doword pseu-do-word
quadrat-ics qua-drat-ics
quasiequiv-a-lence qua-si-equiv-a-lence
quasi-hy-ponor-mal qua-si-hy-po-nor-mal
quasir-ad-i-cal qua-si-rad-i-cal
quasiresid-ual
qua-sis-mooth
qua-sis-ta-tion-ary
qu-a-si-tri-an-gu-lar
re-ar-range-ment
Rie-man-nian
schedul-ing
Schrodinger
Schwarzschild
semidef-i-nite
semi-ho-mo-th-etic
ser-vomech-a-nism
setup
solenoid
spheroid
stochas-tic
Stokess-che
sub-scriber
summable
tech-nis-che
ther-moe-las-tic
times-tamp
ve-r-all-ge-mein-erte
Verteilun-gen
vs-pace
Wahrschein-lichkeit-s-the-o-rie
    Wahr-schein-lich-keits-the-o-rie
waveg-uide wave-guide
whitesided white-sided
whites-pace white-space
Yingy-ong Shuxue Jisuan
Ying-yong Shu-xue Ji-suan
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## Fonts

## Notes on Typeface Protection

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## Preamble

The main question of typeface protection is: "Is there anything there worth protecting?" To that the answer must certainly be: "Yes." Typeface designs are a form of artistic and intellectual property." To understand this better, it is helpful to look at who designs type, and what the task requires.

## Who makes type designs?

Like other artistic forms, type is created by skilled artisans. They may be called type designers, lettering artists, punch-cutters, calligraphers, or related terms, depending on the milieu in which the designer works and the technology used for making the designs or for producing the type.
("Type designer" and "lettering artist" are self-explanatory terms. "Punch-cutter" refers to the traditional craft of cutting the master image of a typographic letter at the actual size on a blank of steel that is then used to make the matrix from which metal type is cast. Punchcutting is an obsolete though not quite extinct craft. Seeking a link to the tradition, modern makers of digital type sometimes use the anachronistic term "digital punch-cutter". "Calligrapher" means literally "one who makes beautiful marks". The particular marks are usually hand-written letters, though calligraphers may design type, and type designers may do calligraphy.)

It usually takes about seven years of study and practice to become a competent type designer. This seems to be true whether one has a Ph.D. in computer science, a high-school diploma, or no academic degree. The skill is acquired through study of the visual forms and practice in making them. As with geometry, there is no royal road.

The designing of a typeface can require several months to several years. A family of typefaces of four different styles, say roman, italic, bold roman, and bold italic, is a major investment of time and effort. Most type designers work as individuals. A few work in partnership (Times Roman ${ }^{(R)}$, Helvetica $^{(R)}$, and Lucida ${ }^{(R)}$ were all, in different ways, the result of design collaboration). In Japan, the large character sets required for a

