

ETAOIN SHRDLU NON-CRASHING SETS

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The designers of the Linotype machine arranged its keyboard for optimum speed, assuming that the most common letters of English were e,t,a,o,i,n,s,h,r,d,l,u in that order. The Oxford English Dictionary (Second Edition) has some amusing citations:

The author sends in a manuscript without exclamation marks. The linotyper puts them in, the author takes them out in proof, the linotyper puts them back in, together with a couple of etaoins (J. Thurber, *Owl in Attic*, 1931)

What I love about newspapers is their etaoin shrdl (Listener, 15 Jun 1967)

'Loi of pleasure but also a lot of anxiety and heart-searching.' etaoinshrdlu cmfwyp shrdlu cd showed that cinema and per-Mrs Nissel said that the study forming arts ticket prices had more or less remained in line with the Retail Price Index up to 1975/76 (Daily Telegraph, 13 Sep 1983)

Are there twelve five-letter words, made up of those twelve letters, having no common letters in any position? Using my personal list of 5727 words, there are 924 words made from only those letters, but no solutions to the problem. On the other hand, if one asks for only eleven disjoint words instead of twelve, my program found 43,888 solutions. The nicest of these was:

third,ideal,dolls,ninth,stunt,erase,radii,heron,usher,outdo,aloha,

I investigated the 43,888 solutions to see which five-letter strings would make a full set. Exactly 10,406 different strings resulted. And only one of these, **trull**, was a word in my on-line dictionary. So I found a unique solution to my problem:

adieu,issue,ohhhh,eland,uteri,snoot,trull,lotsa,reran,nadir,hunts,dildo

There are other possibilities if I lower my standards slightly. For example, if I allow Hindu, I get three more solutions:

hindu,torsi,ahhhh,neato,ultra,stunt,droid,ideal,osier,radon,ensue,lulls
hindu,assai,ohhhh,idiot,troll,latus,delta,utero,slain,nurse,round,ender
hindu,uteri,ohhhh,lasso,asana,rerun,idiot,tulle,nodal,enter,slots,druid

and a fourth comes by changing (slots,druid) to (sluts,droid). Or, if Nehru is legitimate (a Nehru jacket), we have:

nehru,ennui,usual,idler,stood,altho,hadda,orals,thine,rosin,durst,lieth
nehru,ennui,usual,idiot,ortho,theta,harsh,diode,alder,lulls,rosin,stand

and another when (ortho,alder) is changed to (altho,order). Obviously, the most troublesome word to include is the one ending in U!