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Converting Affix Files: Understanding the Affix File Format

An affix is either a prefix or a suffix attached to root words to make other words. For example supply -> supplied by dropping the "y" and adding an "ied" (the suffix).

Here is an example of how to define one specific suffix borrowed from the en_US.aff file used by the OpenOffice org spellchecker

```
SFX D Y 4
SFX D 0 d e
SFX D y ied [^aeiou]y
SFX D 0 ed [^ey]
SFX D 0 ed [aeiou]y
```

This file is space delimited and case sensitive.
So this information can be interpreted as follows:

The first line has 4 fields:

Field

- 1 SFX - indicates this is a suffix
- 2 D - is the name of the character which represents this suffix
- 3 Y - indicates it can be combined with prefixes (cross product)
- 4 4 - indicates that sequence of 4 affix entries are needed to properly store the affix information

The remaining lines describe the unique information for the 4 affix entries that make up this affix. Each line can be interpreted as follows: (note fields 1 and 2 are used as a check against line 1 info)

Field

- 1 SFX - indicates this is a suffix
- 2 D - is the name of the character which represents this affix
- 3 y - the string of chars to strip off before adding affix
(a 0 here indicates the NULL string)
- 4 ied - the string of affix characters to add
(a 0 here indicates the NULL string)
- 5 [^aeiou]y - the conditions which must be met before the affix can be applied

Field 5 is interesting. Since this is a suffix, field 5 tells us that there are 2 conditions that must be met. The first condition is that the next to the last character in the word must *NOT* be any of the following "a", "e", "i", "o" or "u". The second condition is that the last character of the word must end in "y".

Now for comparison purposes, here is the same information from the Ispell english.aff compression file which was used as the basis for the 00o one.

flag *D:

E	>	D	# As in create > created
[^AEIOU]Y	>	-Y,IED	# As in imply > implied
[^EY]	>	ED	# As in cross > crossed