Allomorph Generator User Documentation

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Contents

1 Introduction

Allomorph Generator is a tool that works as a utility in *FieldWorks Language Explorer* (aka *FLEx*). *Allomorph Generator* allows you to define operations on Citation Forms to produce new Stem Allomorphs in the entry of the matching Citation Form.

Allomorph Generator works with version 9.1.14 Beta or higher of *FLEx* and is only available on 64-bit Windows computers.

Each operation defined in *Allomorph Generator* describes a pattern that is used to match Citation Forms in the *FLEx* database. There also is a set of actions that are to be applied to each such Citation Form. The result of the action will produce a new Stem Allomorph in that entry.

1.1 Installation

To install *Allomorph Generator*, obtain the installer from https://github.com/AndyBlack/FLExAllomorphGenerator/tree/master/Installer/Output/AllomorphGeneratorDllSetup.exe. The installer will check to see if you have installed *FieldWorks Language Explorer* version 9. If not, it will abort.

We recommend that you close *FieldWorks Language Explorer* before running the *Allomorph Generator* installer.

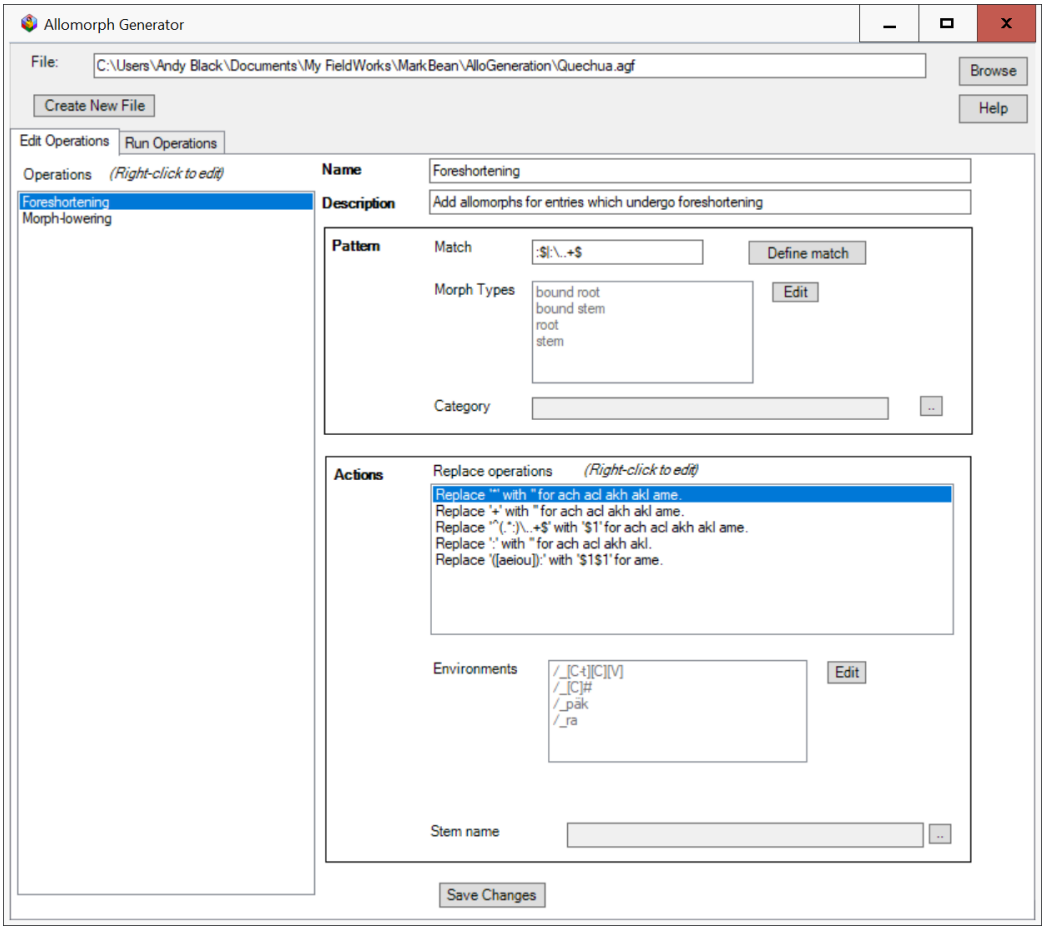
1.2 Invoking *Allomorph Generator* from within *FLEx*

While running *FLEx*, use Tools menu item / Utilities.... Find the “Allomorph Generator” item, check it, and then click on the “Run Checked Utilities Now” button.

1.3 Appearance

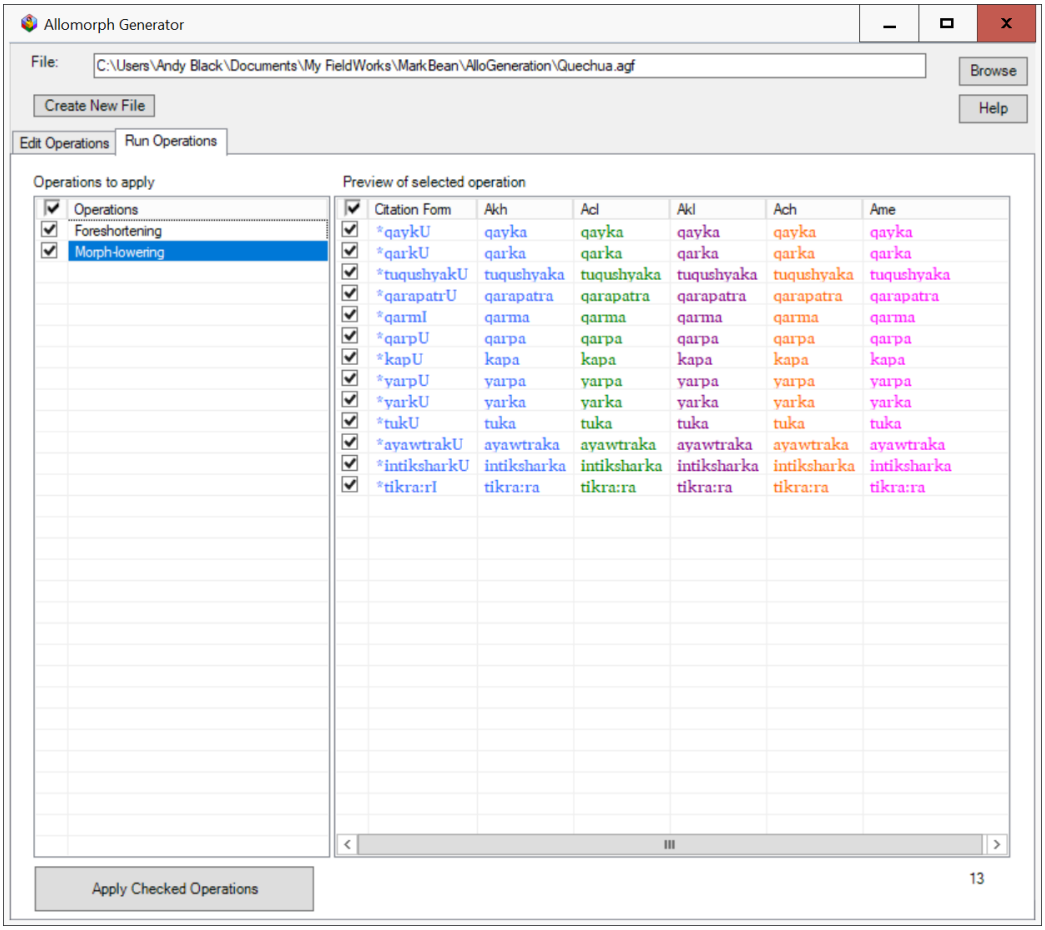
Allomorph Generator looks something like what is shown in (1).

(1)



The top portion shows the file containing the allomorph generation operations. Below it are two tabs, one for editing the operations and one for running them. See section 2 for information on using the Edit Operations tab. In one project, the Run Operations tab looks like what is in (2).

(2)



This tab is explained in section 3 below.

The “Create New File” button is used to create a new file containing a new set of operations. When saving an *Allomorph Generator* file, I suggest you put it in a folder under the “My FieldWorks” directory in your “Documents” folder.

The “Browse” button is used to select an operations file. *Allomorph Generator* files by convention have an extension of “.agf” and this is what the file browser uses.

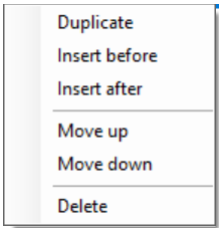
The “Help” button is used to get this user documentation file or to show the “About” dialog box.

2 Edit Operations tab

The Edit Operations tab has a list of operations in a column on the left. When you select one of them, the rest of the tab contains the information about the selected operation. See sections 2.1–2.4 for more.

You can create new operations, rearrange them, or delete them by right-clicking on one. You will then see a context menu like what is in (3).

(3)



2.1 Operation name and description

The top two text boxes are where you give a name and a description for the operation. These are for your benefit so use something that makes sense to you.

2.2 Pattern section

The pattern section contains three parts which define which Citation Forms will be used: the Match pattern, the morpheme types to use, and an optional category.

2.2.1 Match

The "Match" part uses the same dialog box that *FLEx* uses for filter searches. To use it, click on the "Define match" button.

2.2.2 Morph Types

To set which morpheme types to use in the pattern, click on the "Edit" button to the right of the box showing the currently selected morpheme types.

2.2.3 Category

If you need to limit the pattern to a particular category, then click on the *FLEx*-like chooser button to the right of the category box. Note that if you need to insert a Stem Name for a Stem Allomorph, you will need to select a category that has that Stem Name defined.

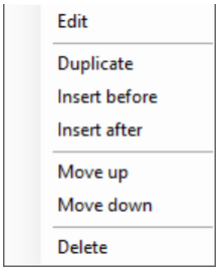
2.3 Actions section

The Actions section allows you to define a set of ordered replace operations to be applied to the Citation Form to create the form of the new allomorph. You can also optionally select a set of environments and/or a Stem Name to be included with the new Stem Allomorph.

2.3.1 Replace operations

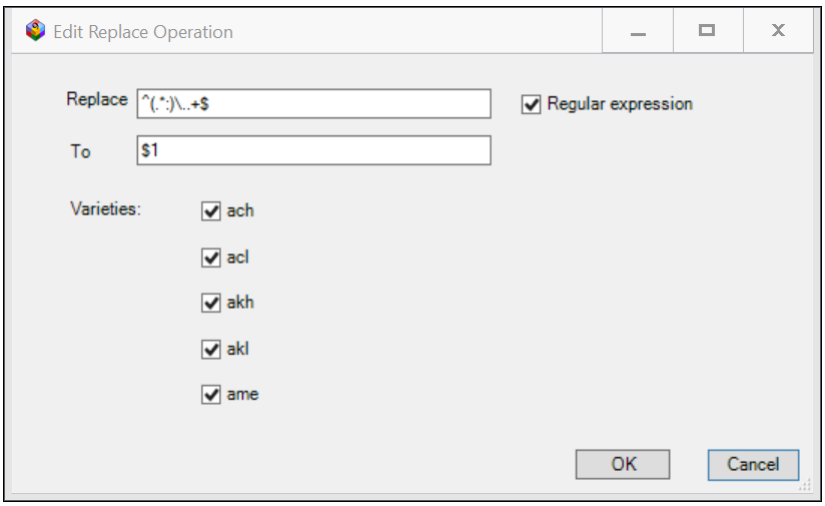
The first box in the actions section contains an ordered set of replace operations. They are ordered in the sense that the output of one is the input to the next. You can edit one by double-clicking on it or by right-clicking and choosing an appropriate option from the ensuing context menu. Example (4) shows what this menu might look like.

(4)



When you edit a replace operation, you will see a dialog box that will look something like what is in (5).

(5)



There are two text boxes: one for what to look for (“Replace”) and one for what to change what matches ("To”). The replace can be a portion of the content of the Citation Form. That is, you do not have to try to match the entire content. There is an option to use regular expressions for what to replace and what to change it to. Simply check the “Regular expression” check box or leave it unchecked.

Each replace operation can be applied to one or more of the five writing systems we're using. Check all that apply.

2.3.2 Environments

If you need to have one or more environments be added to the Stem Allomorph that will be produced, click on the “Edit” button to the right of the environments box. This brings up a chooser showing all currently available environments in the *FLEx* project. Click on the check box before all those that you need to be added.

2.3.3 Stem Name

If you need a Stem Name to be added to the Stem Allomorphs, then click on the *FLEx*-like chooser button to the right of the Stem Name box. It will show any Stem Names associated with the category chosen in the Pattern section.

2.4 Save changes button

Use the “Save Changes” button to save any changes you have made to the operations file.

3 Run Operations tab

The Run Operations tab lists the same set of operations as are shown in the Edit Operations tab except that each one has a check box in front of it. Whichever operation is currently selected will be applied and the resulting Stem Allomorph forms will be shown in the “Preview of selected operation” portion of the tab.

Note that the preview portion only shows Citation Forms which currently have no allomorphs. In addition, the Citation Forms shown are for the default vernacular writing system.

Both of the items in the Run Operations tab have check boxes and both have a checked check box as the column header of the first column. When you click on this checked box in the top row, you will see the menu shown in example (6).

(6)

This works like the bulk edit check box menu does in *FLEx*. For operations, you choose which operations you want to be applied when you press the “Apply Checked Operations” button. For the preview portion, it works like it does in bulk edit in *FLEx*: if an item is checked, a new Stem Allomorph will be produced for the entry containing that Citation Form. If an item is not checked, it will be ignored (i.e., it will remain as it currently is).

See section 4 for more on what the “Apply Checked Operations” button does.

4 Applying operations

When you use the “Apply Checked Operations” button, *Allomorph Generator* will first check to see if there are any environments or Stem Names which are not currently valid in the *FLEx* project and give you a message about which ones they are and which operation they are in. While not necessarily likely, it is possible that a given environment or Stem Name may have been deleted in the *FLEx* project since you created the operation.

If there are no problematic environments or Stem Names, then *Allomorph Generator* will insert a new Stem Allomorph for each checked operation. When it is done, the preview portion will no longer show those Citation Forms which have had a Stem Allomorph added. In addition, in *FLEx*, the Edit / Undo menu item will show the last operation performed. You can use this to reverse the changes it made. In fact, the Undo/Redo menus will list the operations performed in reverse order.

If the replace operations for a particular writing system results in an empty form, *Allomorph Generator* will use a non-breaking space to avoid the *FLEx* parser using a non-empty value in some other writing system for that Stem Allomorph.

5 Restarting *Allomorph Generator*

Whenever you exit and restart *Allomorph Generator*, it will do the following:

1. remember its window size, location, and layout;
2. remember which *Allomorph Generator* file you last chose;
3. remember which tab you last selected;
4. remember which operation you last selected for each tab.

6 Error messages

In certain situations,*Allomorph Generator* will issue an error message.

Table 1 lists the errors *Allomorph Generator* reports along with a brief description of what the error might mean.

Error	Meaning
The category '*category name*' was not found in the FLEx database	The indicated category is no longer found in the *FLEx* project. Try to change it to one that is now present. This can appear when setting a Stem Name in an action.
No operations are selected, so there's nothing to do	This is shown when the “Apply Checked Operations” button is pressed but no operations have been checked. Try checking at least one operation.
The environment '*environment*' is no longer found. Please fix it in operation '*operation name*'.	The indicated environment is no longer in the *FLEx* project. You will need to fix it in the indicated operation.
The stem name '*stem name*' is no longer found. Please fix it in operation '*operation name*'.	The indicated Stem Name is no longer in the *FLEx* project. You will need to fix it in the indicated operation.

Table 1: *Error messages*

If you get an error message not in the list above, please report it. See section 8.

7 Known problems

The following items are known to be less than desirable with this version of *Allomorph Generator*:

1. *Allomorph Generator* only works with version 9.1.14 Beta or higher of *FLEx*.
2. *Allomorph Generator* currently has its five writing systems "hard-coded." A future version may list out the possible vernacular writing systems based on what is in the *FLEx* project.
3. The user interface is in English only.
4. When you start *Allomorph Generator*, if *FLEx* is showing as full screen, you may not see the *Allomorph Generator* dialog. You may have to either make *FLEx* be in its "Restore" mode or find the *Allomorph Generator* dialog and move it to another screen.

8 Support

If you have any questions with *Allomorph Generator* or find bugs in it, please send an email to blackhandrew@gmail.com.