

Eight things that make a Praat script (very) slow:

0) Test scripts first with small amounts of data:

Test scripts with one file first (and check if data makes sense). Then test it with two files in one directory/folder, and only after that apply it to larger amounts of data.

1) Don't open a .wav file if you don't need it at all:

If you only want to evaluate times (durations or time points), you need only the .TextGrid files and not the .wav files.

2a) Don't calculate the same things multiple times

Commands/functions like "To Formant", "To Pitch", "To Intensity", etc. always calculate the data for the whole sound object (usually a .wav file, i.e. sound object). If you go through a file with a (for/while/repeat) loop and calculate the formants/pitch/intensity for each interval for which you need the data, the same data is always calculated for the whole object.

Do instead: Before the loop, which runs through the intervals, calculate the formants/pitch/intensity once and then query the data for the specific interval.

2b) Don't run the same script multiple times with small changes

If you only need data (formants etc.) for special intervals, e.g. [a] or [i], it is inefficient to first run a script for [a], and then run a script for [i] a second time.

Do instead: List all intervals (i.e. link them with 'or' in the 'if' query) for which you want to collect the data. Or: output the data for all intervals and later select the corresponding data with the spreadsheet or statistics program in the result file (or sort and select there).

3) Delete objects that are no longer used ('remove')

Praat loads all objects (everything in the objects list) into the computer's main memory. If this is a lot of data (e.g. many or long .wav files, spectra, spectrograms etc.) then the memory will eventually be full and the operating system will start to swap data to the disk, which will make everything about 1000 times slower (and possibly crash the script).

Do instead: delete objects (e.g. in the for/while/repeat loops) when they are no longer needed (and do not only delete everything at the end of the script) - but be careful not to delete the wrong objects as well (e.g. the 'string list' of all files you want to edit).

4a) Don't output data in the info window

Praat gets (very) slow when it writes something in the info window.

Do instead: Save data directly into a file (e.g. with 'fileappend').

4b) Don't output data in the info window

To inform the user (and for testing, e.g. to detect endless loops) it may be useful to indicate which file is currently being processed by reporting it in the info window. This slows down the processing of many files considerably. You should (after testing a script with few files) only print a 'Done' (or something like that) at the end of the script so that you know that the script has arrived at the end. (It can be a bit disturbing if you seem to get 'nothing' after starting a script - check whether the output file gets bigger to get an indication that data is written to the file).

5) Don't let Praat output information

Praat informs you when it takes a little longer for something (e.g. downsampling during formant calculation or activity during pitch calculation). This also slows down the script. You can suppress this by placing 'noprogess' in front of the corresponding command, e.g.

```
noprogess To Pitch: 0, 75, 500
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