

# Praat Launcher Document (2): Tutorials

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## History

- Version 1.0 (Nov. 12, 2011)
  - Released on the web

## 1 Introduction

This document provides a tutorial for **Praat Launcher**, a Microsoft Excel Add-in that launches **Praat**<sup>1</sup> from Excel worksheets.

In this tutorial, it is assumed that the setup of Praat Launcher has been completed. For the setup, see `setup_prln.pdf`, available at the following site:

<http://language.world.coocan.jp/scripts/?PraatLauncher>

## 2 Sample Data

Download the sample data set used in this tutorials.

<http://language.world.coocan.jp/prln/sample20111103.zip>

The organization of the sample set is as follows. Unzip it and put the “sample” folder in an appropriate location (**N.B.** In the case of Windows, do not put it in a folder whose path contains non-ASCII characters).

```
sample20111103
├── sample
│   ├── wav
│   │   ├── sample1.wav
│   │   ├── :
│   │   └── sample8.wav
│   ├── TextGrid
│   │   ├── sample1.TextGrid
│   │   ├── :
│   │   └── sample8.TextGrid
│   └── dat
│       ├── sample_word.txt
│       └── sample_bi.txt
```

Table 1: The Organization of the Sample Data Set

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<sup>1</sup><http://www.fon.hum.uva.nl/praat/>

The sample set includes eight .wav files each of which contains Japanese read speech (female voice), and the corresponding .TextGrid files. For the contents of these files, see Appendix A.

In addition to wav and TextGrid files, the sample set includes two text files (in the “dat” folder). They are tab-separated text files, automatically generated from the sample TextGrid files. The contents will be explained soon.

### 3 Trial

Now, we are ready to launch. Let’s give it a try. To see the functions of **Praat Launcher**, quit Praat if it is running.

1. Open `sample\dat\sample_word.txt` with Excel (the worksheet will be called **Data Sheet** henceforth).

A few words on `sample_word.txt`:

- `sample_word.txt` contains all labels and timestamps on the word tier in the sample TextGrid files. The contents are shown in Figure 2.

Column	Contents
A	filename
B	start time of the KWIC key
C	end time of the KWIC key
D	preceding context
E	KWIC key (the label in question)
F	following context
G	reversed string of the preceding context (intended to be used as a sort key)

Table 2: Contents of `sample_word.txt`

- Columns A-C (filename and timestamps) are primarily for Praat Launcher; these values are passed to Praat.

- Columns D-F (KWIC-formatted label information) are exclusively for the user; they can be used to help you comprehend the contexts of the labels, though Praat Launcher works well without them.
  - The file is sorted on Column E (KWIC key) → Column F (following context) → Column G (reversed string of the preceding context).
2. [Optional] Make the following modifications to the Data Sheet (the current worksheet):
- Make Column D (preceding context) right-aligned,
  - Column E (KWIC key) center-aligned, and
  - Adjust the widths of Columns D-F (you do not have to show the whole values in Columns D and F).

	A	B	C	D	E	F	G	H	I
13	sample7	2.76055	3.268209	a/de/onjigirji/o/takusaN/moraQ/ta	#		at/Qiarom/Nasukat/o/irijigino/ed/s		
14	sample5	2.523275	3.036009	ji/de/onjigirji/o/takusaN/moraQ/ta	#		at/Qiarom/Nasukat/o/irijigino/ed/i		
15	sample3	2.970365	3.570068	i/no/onjigirji/o/takusaN/moraQ/ta	#		at/Qiarom/Nasukat/o/irijigino/on/i		
16	sample1	2.694543	3.175329	ji/no/onjigirji/o/takusaN/moraQ/ta	#		at/Qiarom/Nasukat/o/irijigino/on/i		
17	sample6	0.846581	1.285956		# aomrji	de/omjyage/o/takusaN/mora#			
18	sample5	0.428564	0.855447		# aomrji	de/onjigirji/o/takusaN/moraQ#			
19	sample2	0.91196	1.306729		# aomrji	no/omjyage/o/takusaN/mora#			
20	sample1	0.722625	1.145843		# aomrji	no/onjigirji/o/takusaN/moraQ#			
21	sample8	1.268096	1.448961	#/mjyazjma	de	omjyage/o/takusaN/moraQ/ti:amizayim/#			
22	sample6	1.285956	1.43313	#/aomrji	de	omjyage/o/takusaN/moraQ/ti:iro moa/#			
23	sample7	1.162606	1.310786	#/mjyazjma	de	onjigirji/o/takusaN/moraQ/ta:amizayim/#			
24	sample5	0.855447	1.005891	#/aomrji	de	onjigirji/o/takusaN/moraQ/ta:iro moa/#			
25	sample8	0.801086	1.268096		# mjyazjma	de/omjyage/o/takusaN/mora#			
26	sample7	0.712648	1.162606		# mjyazjma	de/onjigirji/o/takusaN/moraQ#			
27	sample4	0.940894	1.420518		# mjyazjma	no/omjyage/o/takusaN/mora#			
28	sample3	0.967396	1.385023		# mjyazjma	no/onjigirji/o/takusaN/moraQ#			
29	sample8	2.450466	2.769004	/mjyazjma/de/omjyage/o/takusaN	moraQ	ta/#	Nasukat/o/egayimo/ed/amizayim/		
30	sample6	2.479033	2.811847	#/aomrji/de/omjyage/o/takusaN	moraQ	ta/#	Nasukat/o/egayimo/ed/iro moa/#		
31	sample4	2.538305	2.861961	/mjyazjma/no/omjyage/o/takusaN	moraQ	ta/#	Nasukat/o/egayimo/on/amizayim/		
32	sample2	2.402599	2.711494	#/aomrji/no/omjyage/o/takusaN	moraQ	ta/#	Nasukat/o/egayimo/on/iro moa/#		
33	sample7	2.264763	2.571118	/mjyazjma/de/onjigirji/o/takusaN	moraQ	ta/#	Nasukat/o/irijigino/ed/amizayim/f		
34	sample5	2.019369	2.327303	#/aomrji/de/onjigirji/o/takusaN	moraQ	ta/#	Nasukat/o/irijigino/ed/iro moa/#		
35	sample3	2.472635	2.78114	/mjyazjma/no/onjigirji/o/takusaN	moraQ	ta/#	Nasukat/o/irijigino/on/amizayim/i		
36	sample1	2.199238	2.50735	#/aomrji/no/onjigirji/o/takusaN	moraQ	ta/#	Nasukat/o/irijigino/on/iro moa/#		
37	sample4	1.420518	1.573957	#/mjyazjma	no	omjyage/o/takusaN/moraQ/ti:amizayim/#			

Figure 1: Data Sheet (modified)

These modifications are, in fact, independent of the functions of Praat Launcher; it works well even if you skip this step. That said, the worksheet without these modifications would be far from human-friendly.

3. Select the Praat Launcher menu's **Setting** → **SettingSheet**. Then, a new worksheet named "PraatSetting" is created (we will call this worksheet **Setting Sheet** henceforth).

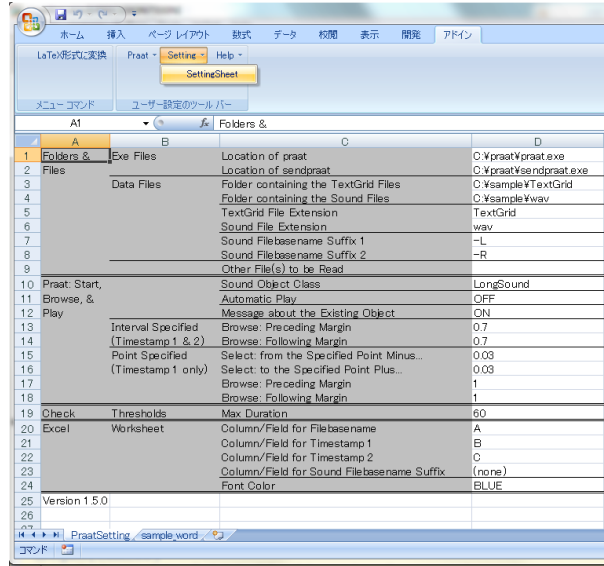


Figure 2: the Setting Sheet

4. Rewrite the values of Column D of rows 1-4 on the Setting Sheet to suit your environment. Examples are given in Tables 3 and 4 below:

Column C	Column D
Location of praat	C:\praat\praat.exe
Location of sendpraat	C:\praat\sendpraat.exe
Folder containing the TextGrid Files	C:\speech\sample\TextGrid
Folder containing the Sound Files	C:\speech\sample\wav

Table 3: Example of the Setting Sheet (in the case of Windows)

Column C	Column D
Location of praat	/Applications/Praat.app/Contents/MacOS/Praat
Location of sendpraat	/Applications/sendpraat_ppc
Folder containing the TextGrid Files	~/Desktop/speech/sample/TextGrid
Folder containing the Sound Files	~/Desktop/speech/sample/wav

Table 4: Example of the Setting Sheet (in the case of Macintosh)

- In rows 1-2, specify the locations of the executable files which have been confirmed to operate (cf. `setup_prln.pdf`)
  - [Windows] In Japanese environments, “\” may be represented as “¥”.
  - [Macintosh] “&” is **not** necessary in row 1.
5. Go back to the Data Sheet, and put the cell pointer anywhere you like.
  6. Select Praat Launcher menu’s `Praat` → `TextGrid+Sound` (or type `C-S-v` (hold down Ctrl and Shift, and type v), or select the (right-)click menu’s `Praat:TextGrid+Sound`). Praat should then start.
    - Please confirm that:
      - [Praat TextGridEditor] TextGrid and sound files specified in Column A have been opened, and the region specified in Columns B and C is selected<sup>2</sup>.
      - [Excel worksheet] the fonts on the active row have turned blue.
    - If Praat does not start, some error message will be issued. Consult it and retry!
  7. Examine the sound and annotated labels/boundaries on Praat TextGridEditor, and modify them if necessary (or do anything you can do on Praat).
  8. Save it (if you modified it) and quit Praat (Praat shortcut keys `C-s` (save) and `C-q` (quit) are convenient).

<sup>2</sup>Columns for the basename and timestamps in the Data Sheet can be changed. See the manual (`man_prln.pdf`).

Now, go back to Step 5, and try other rows. Try also:

- Re-sort the Data Sheet on different keys using Excel's **Sort** function (though it is again independent of the functions of Praat Launcher).
- Save the current data as an Excel Book-formatted file (.xlsx *or* .xls). Given that file, you can continue the work from Step 5 (the point is that the Data Sheet and the Setting Sheet will be lumped into one file.)

\* \* \* \* \*

Let's try the other data file, `sample\dat\sample_bi.txt`.

- `sample_bi.txt` is a tab-separated, quasi-KWIC-formatted text file which contains all labels and timestamps on the BI (Break Indices; strength of prosodic boundaries) tier in the sample TextGrid files.
- The format is approximately the same as `sample_word.txt` (see Figure 2 above).
  - Since the BI tier is a point tier, each label has only one timestamp. Hence, *Column C is empty*.
  - The preceding and following contexts are made of word labels, rather than BI labels (in most cases, it makes little sense to make contexts out of the labels on a point tier).
- It is sorted on Column L (reversed string of the preceding context) → Column I (following context) → Column H (key).

Despite some differences, you can start Praat on this sheet, through the same procedure described above.

Please confirm that:

- If the value of Column C cannot be interpreted as an end time (positive number), an area is selected on the Praat TextGridEditor which contains the value of Column B.

## **4 In a Nutshell**

What Praat Launcher does is:

- read the values of the current row on the Data Sheet;
- read the values on the Setting Sheet;
- start Praat based on these values.

Thus, what you have to do is:

- make a Data Sheet
- make and rewrite a Setting Sheet;
- execute Praat Launcher to start Praat.

For more information, see the manual ([man\\_pr1n.pdf](#)).

Incidentally, it is practically important and worth mentioning that:

- Excel's functions (e.g., right-aligned, sort, filter) are also available.

## **5 Disclaimer**

The author expressly disclaims all liability, loss or risk incurred as a direct or indirect consequence of the use of Praat Launcher.



## Appendix A. Contents of the Sample Data

The read Japanese sentences in the sample data are as follows<sup>3</sup> (“Aomori (aomorji)” and “Miyajima (mjiyazjima)” are Japanese place names):

- sample1:** aomorji -no onjigjiri-o takusaN moraQ-ta.  
 -GEN riceball-ACC many receive-PAST  
 ’(I) received many riceballs (made in) Aomori.’
- sample2:** aomorji -no omjiyage-o takusaN moraQ-ta.  
 -GEN souvenir-ACC many receive-PAST  
 ’(I) received many Aomori souvenirs.’
- sample3:** mjiyazjima -no onjigjiri-o takusaN moraQ-ta.  
 -GEN riceball-ACC many receive-PAST  
 ’(I) received many riceballs (made in) Miyajima.’
- sample4:** mjiyazjima -no omjiyage-o takusaN moraQ-ta.  
 -GEN souvenir-ACC many receive-PAST  
 ’(I) received many Miyajima souvenirs.’
- sample5:** aomorji -de onjigjiri-o takusaN moraQ-ta.  
 -LOC riceball-ACC many receive-PAST  
 ’In Aomori, (I) received many riceballs.’
- sample6:** aomorji -de omjiyage-o takusaN moraQ-ta.  
 -LOC souvenir-ACC many receive-PAST  
 ’In Aomori, (I) received many souvenirs.’
- sample7:** mjiyazjima -de onjigjiri-o takusaN moraQ-ta.  
 -LOC riceball-ACC many receive-PAST  
 ’In Miyajima, (I) received many riceballs.’
- sample8:** mjiyazjima -de omjiyage-o takusaN moraQ-ta.  
 -LOC souvenir-ACC many receive-PAST  
 ’In Miyajima, (I) received many souvenirs.’

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<sup>3</sup>I thank the bearer of the voice (Ken-chan’s mom) for giving me a permission to utilize her voice as samples. Thanks also goes to Yosuke Igarashi, who offered me the sample sentences he designed, and Akira Utsugi, who carried out the annotation for me.

The labelling scheme for the sample data is a simplified version of X-JToBI (Igarashi et al. (n.d.); for X-JToBI (eXtended J.ToBI), see Igarashi et al. (2006)).

## References

- Igarashi, Y. et al. (2006) “Chapter 7. Prosodic Information” (in Japanese) *Construction of the Corpus of Spontaneous Japanese*. National Institute for Japanese Language and Linguistics. Report 124: 347-453.
- Igarashi, Y. et al. (n.d.) *On the Prosodic Labelling “Simplified Version of X-JToBI”* (in Japanese). Unpublished.