

Introduction to Praat: the Basics

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December 11, 2003

1 Working through an example

1. Start Praat

2. Open the sound file `example.wav`:

- *Steps:* Objects window \Rightarrow Static menu (on top) \Rightarrow Read \Rightarrow Read from file... (Ignore the warning "Reading stereo file as mono".)

Effect: An object of type Sound called `example` appears in the object list

3. Playback the Sound-object `example`:

- *Step 1:* Select the Sound-object `example` with the mouse. (If you have just opened it, it is automatically selected.)
- *Step 2:* Press button `Play` in the dynamic menu (on the right)

4. Open the Sound editor

- *Steps:* The Sound-object selected, press button `Edit` in the dynamic menu

Effect: The Editor window comes up.

The top part of the editor window shows the waveform, the bottom part shows the spectrogram, the pitch (blue line), the intensity (yellow or green) and/or the formant analyses (red) of the sound. If some of these analyses are not displayed, you can change it by checking the option

- Show `specktrogram` in the Spectrogram menu (`Spec.`)
- Show `pitch` in the Pitch menu (`Pit.`)
- Show `intensity` in the Intensity menu (`Int.`)
- Show `formants` in the Formants menu (`Form.`)

5. In the Sound editor, you can:

- view the waveform and the analysis
- select different parts of the sound (mouse, or the `Select` menu)
- play back a selection (`View` \Rightarrow `Play`, or click the bar above or below the selection),
- zoom in and zoom out
 - button `in` (in the bottom left corner) to zoom in
 - button `out` to zoom out
 - button `sel` to zoom to selection
 - button `all` to view the whole file

or various `Zoom` options in the menu `View`

- cut out a selection (`File` \Rightarrow `Extract selection`).
- save selection into a file (`File` \Rightarrow `Write selection to WAV file...`)

and lots of other things.

But in the **Sound** editor, you CANNOT, for instance, ANNOTATE the speech signal

6. Close the **Sound** editor

- *Steps:* **File** ⇒ **Close**

2 Annotating in Praat

1. In the Objects window select the **Sound** object **example**

2. Create a "text grid" for the **Sound** object **example**:

- *Step 1:* Dynamic menu ⇒ **Label & segment** - ⇒ **To TextGrid...**
Effect: A dialogue window **To TextGrid...** pops up
- *Step 2:* In the field **Tier names**, specify the list of tiers you want to annotate, e.g. **Sentences Words tones**.

There are two types of Tiers:

- Interval tiers (e.g. **Sentences**, **Words**)
- Point tiers (**tones**)

It is a convention that interval tier names start with a capital, and point tier names with a small letter.

- *Step 3:* In the field **Point tiers**, specify the list of point tiers (e.g. **tones**)
- *Step 4:* Click **OK**

Effect: An object of type **TextGrid** called **example** appears in the object list

3. Select both the **Sound** and the **TextGrid** object **example**

- for instance, by holding the **Ctrl** key and clicking on both objects

4. Open the **Sound+TextGrid** Editor

- *Steps:* The **Sound**- AND the **TextGrid**-objects selected, press button **Edit** in the dynamic menu
Effect: An editor window opens, which is like the **Sound** editor, which additionally shows the text tiers you defined (**Sentences**, **Words**, **tones**)

5. In the **Sound+TextGrid** Editor, you can do (almost) everything you could do in the **Sound** Editor, but in addition you can:

- Set interval boundaries in interval tiers and points in point tiers:
 - *Step 1:* Set cursor at a point that you want to mark by clicking it in the wave form or the analysis window (not the text grid window!)
Effect: The cursor looks like a vertical grey line with a small circle in each tier
 - *Step 2:* Fix the boundary by clicking the small circle in the appropriate tier
Effect: The circle disappears and the boundary becomes red. Now when you move the cursor, the boundary stays where you set it.

By setting boundaries in the interval tier you create intervals, that you can further annotate.

- Label an interval or a point with text:
 - *Step 1:* Select an interval or a point you created (by clicking on it in the text grid window)

– *Step 2:* Add text in the text field at the top of the Editor window.

Effect: The text appears as a label of the interval or the point in the text grid window.

6. Save the annotation in a TextGrid-file (`File ⇒ Write TextGrid to text file...`)

It is important to save your annotation regularly, and before quitting. Praat has no auto-saving function and it will not warn you if you have unsaved data at exit!

3 Praat architecture

3.1 Praat windows and the static menus

Praat windows:

- Praat objects
- Praat picture
- Editor

Each Praat window has a static menu (at the top).

Here are some most important commands from the static menus:

- Praat objects ⇒ Help ⇒ Intro
- Praat objects ⇒ Help ⇒ Search Praat manual ...

3.2 Praat objects and the dynamic menus

Praat works with objects of different types:

- Sound
- LongSound
- TextGrid
- Pitch
- and many others

A dynamic menu (objects window, right) is associated with objects of each type, which shows the things you can do with object of that type.

4 More information on Praat

- The Praat Homepage: <http://www.praat.org>
- The Praat Help pages
- Frank Kügler's tutorial on *Scripting in Praat*