Install PRAAT: Download the appropriate version for your computer system from praat.org. It is advisable to install the 64bit version (but on a 32bit Windows system you can only install a 32bit Version). The program uses appx. 25 MB and creates only few additional files in the system. Useful documentation etc. (in German) is at the "PraatPfanne" (<http://praatpfanne.lingphon.net/>).

Recording:

1) Start Praat

2) *New → Record mono sound… →* (usually 44100 Hz = CD-Quality) *→ Record*

3) Make sure that the level indicator stays green or hits yellow only temporarily, but does not become red (neither should the level be too low and remain in the lower section of the bar display).

4) Click *Stop* at the end; insert a *Name:* and click *Save to list & Close*. The recording is now in the memory of the program (and appears as *Sound* in in the *Objects:*-list, but it is not stored on the disc of your computer (i.e., it is lost when you quit Praat)!

Save a *Sound* object as a WAV-(audio)-file to the disc:

1) Select in the *Objects:* list the *Sound* and use *Save → Save as WAV file… →* (File browser) to write it to the disc (**don't** store it as a text file: that is possible but the file will be excessively large).

Read a WAV-File from the disc:

1) *Open → Read from file… →* (File browser)

Display a waveform = *Sound object*:

1) Select in the *Objects:* list the *Sound* and click *View & Edit*.

2) Usually the *Spectrum* is selected and *Pitch*, *Intensity*, *Formant*, and *Pulse* are not (you can switch the individual displays on of off by toggling the *Show* check-mark in the appropriate tabs).
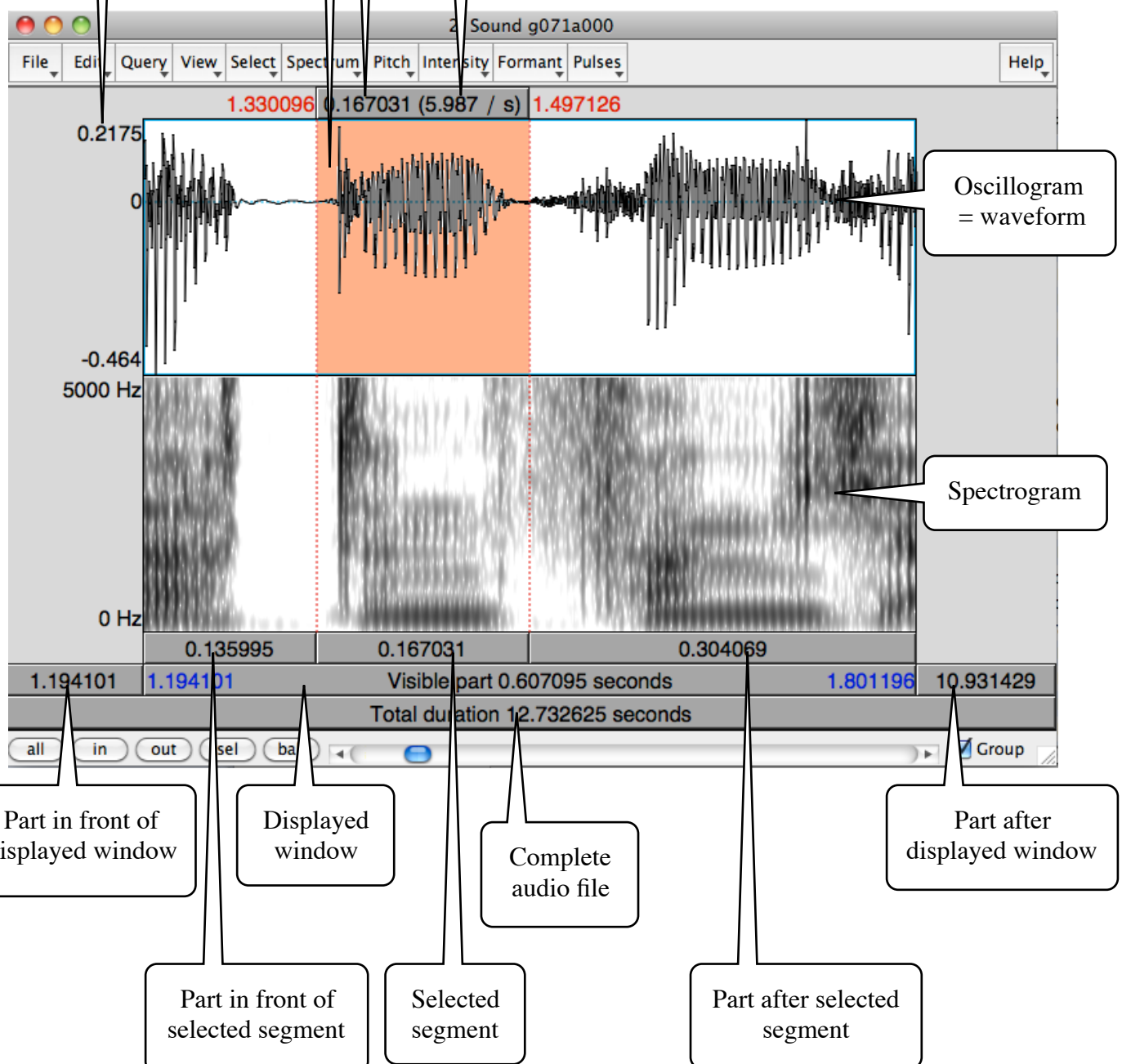
Select a segment:
Click with the left mouse button and drag the cursor-line to select a signal segment.
The selected segment can be expanded with *View → Zoom to selection* (<ctrl>N / ⌘N)

Relative amplitude (-1…1)

Duration of the selected segment in seconds

Reciprocal of the duration (i.e. frequency) in Hertz

2. Sound g071a000

File Edit Query View Select Spectrum Pitch Intensity Formant Pulses   Help

1.330096 0.167031 (5.987 / s) 1.497126

0.2175

0

-0.464

5000 Hz

0 Hz

Oscillogram = waveform

Spectrogram

0.135995   0.167031   0.304069

1.194101   1.194101   Visible part 0.607095 seconds   1.801196   10.931429

Total duration 12.732625 seconds

all   in   out   sel   ba   Group

Part in front of displayed window

Displayed window

Complete audio file

Part after displayed window

Part in front of selected segment

Selected segment

Part after selected segment

Adding an interval tier for labeling:

1) Select *Sound* in the *Objects:*-list

2) *Annotate → To TextGrid...*

3) *All tier names:* replace "Mary John bell" by "Segments" (or whichever name you fancy)

4) Delete "bell" from *Which of these are point tiers?*

5) Click *OK*

6) Select *Sound* and *TextGrid* in the *Objects:*-list together by holding down the *shift* key

7) Click *View & Edit*

Mark a segment by setting separate begin and end marks:

8) Select beginning of segment in the waveform-part of the edit-window

9) Use *Interval → Add interval on tier 1* or "⌘1" (on a Mac) or "<ctrl>1" (on a PC)

   (The number "1" refers to the number of the tier)

10) Type the name of the segment (the name appears on top of the waveform in a separate frame; it can always be edited there)

11) Select end of segment in the waveform-part of the edit-window

12) Use *Interval → Add interval on tier 1* or "⌘1" (on a Mac) or "<ctrl>1" (on a PC)

Mark a segment by setting begin and end marks together:

8) Select beginning of segment in the waveform-part of the edit-window and drag cursor to end of segment by keeping the left mouse button pressed.

9) Use *Interval → Add interval on tier 1* or "⌘1" (on a Mac) or "<ctrl>1" (on a PC)

   (The number "1" refers to the number of the tier)

10) Type the name of the segment (the name appears on top of the waveform in a separate frame; it can always be edited there)

Deleting a segment boundary:

1) Click on the segment boundary in the tier (blue or red line)

2) Strike "<alt><delete>" together

Moving a segment boundary:

1) Grab (left-click and keep left button down) the segment boundary in the segment tier and move it

Changing the name of a segment:

1) Click on the segment in the segment frame (below speech signal and spectrogram)

2) Edit the name in the segment name frame (above the speech signal)

After your work is finished do not forget to write the TextGrid as a text file to disc!

1) Select the *TextGrid* alone (and only that – **not together with the sound!**) in the *Objects:*-list and use *Save → Save as text file...* → (file browser) to write it to the disc.

Extracting segment times from a *TextGrid* file in Praat:

1) Select the *TextGrid* alone (and only that – **not together with the sound!**) in the *Objects:*-list and use *Down to Table…*

2) This opens a window where you can select the number of decimals for the time, whether lines should be numbered, whether tier names and empty tiers should be included or not. Select what you want and click *OK*.

3) Select the newly created *Table* in the *Objects:*-list and use *Save → Save as tab-separated file…* → (file browser) to write it to the disc.

4) The default extension of the file will be *.Table,* It is advisable to change it to *.txt* to be able to open with a program, e.g. with Excel.

5) Note that Praat list numbers in the English/American format with a decimal **point** and not with the German decimal **comma**. You need to convert these to a German version with a text editor (e.g. TextWrangler or Notepad++; if you use Word make sure to save the file a as a pure text format and not as .docx), before you copy the data into a German Excel (or similar) spreadsheet. If you continue to use an English/American program (like JMP or R), you do not need to make this conversion.

Onset of segment (in seconds)

Label of segment

Offset of segment (in seconds)

Name of tier

Example of formula to compute duration of segment

			SUM			fx	=D -A2		
Functions		**A**		**B**	**C**		**D**	**E**	**F**
1	tmin		tier		text		tmax		
2		0,136	Segments		label_1		1,443	=D2-A2	
3		1,443	Segments		label_2		2		
4									
5									
6									

In case you copied files from a Mac to a Windows computer there appear all filenames as additional files with a dot in front of the names (i.e. there is not only a file "signal.wav" but additionally a file ".signal.wav") – delete these files with the additional dot. You may need to check

       View → Customize this folder → General → Hidden files → Okay

       (Ansicht → Ordner anpassen → Allgemein → Versteckt → Okay)

in the directory/folder window on the Windows machine.