

# drawCompositeFigures.praat

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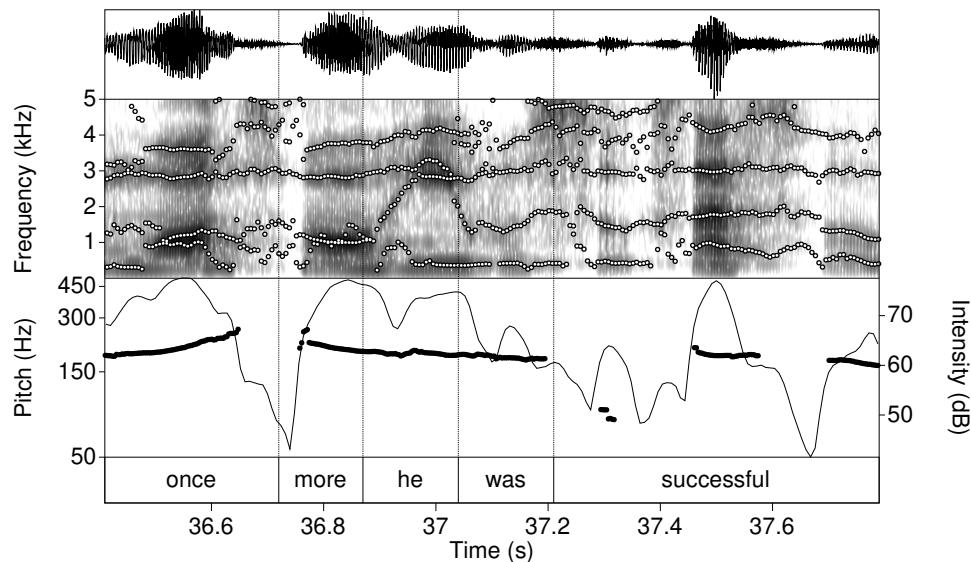
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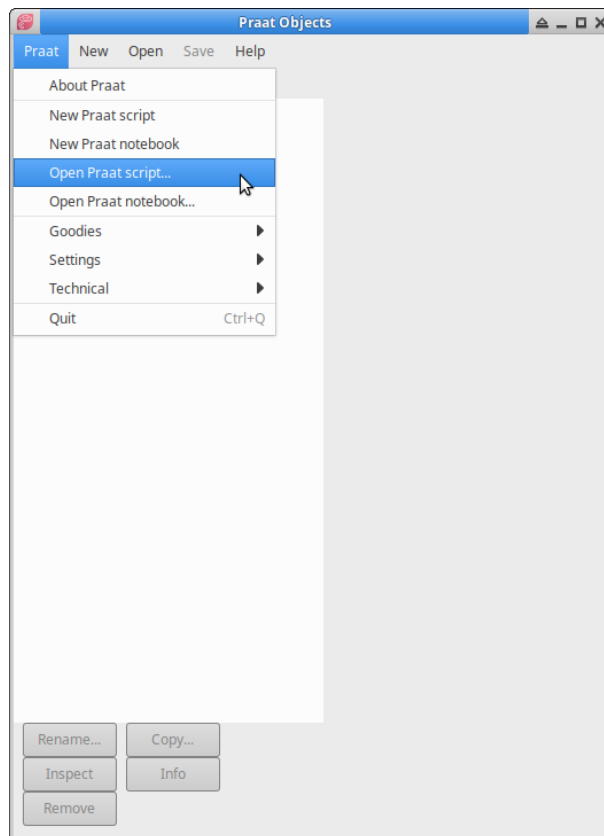
## 1 Introduction

This document describes how to use the Praat script `drawCompositeFigures.praat`. The script is available from <https://github.com/walkergareth/praat/blob/main/visreps/drawCompositeFigures.praat>. The script was written to prepare combinations of visual representations in single figures, some of those combinations not being available in Praat 'out of the box'. Here is a sample image produced by the script, showing the range of representations which the script can draw.

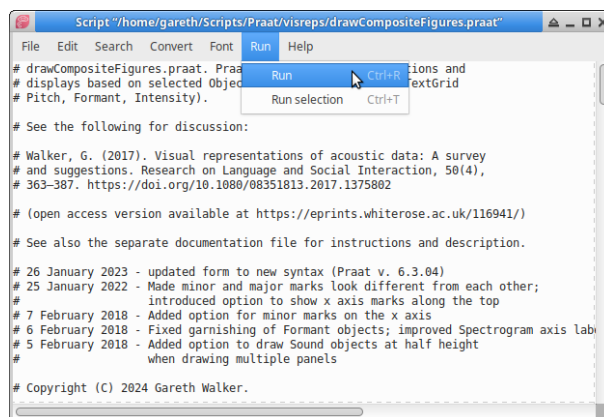


## 2 Running the script

Once downloaded, the script can be opened via the **Praat** menu and the **Open Praat script...** command:



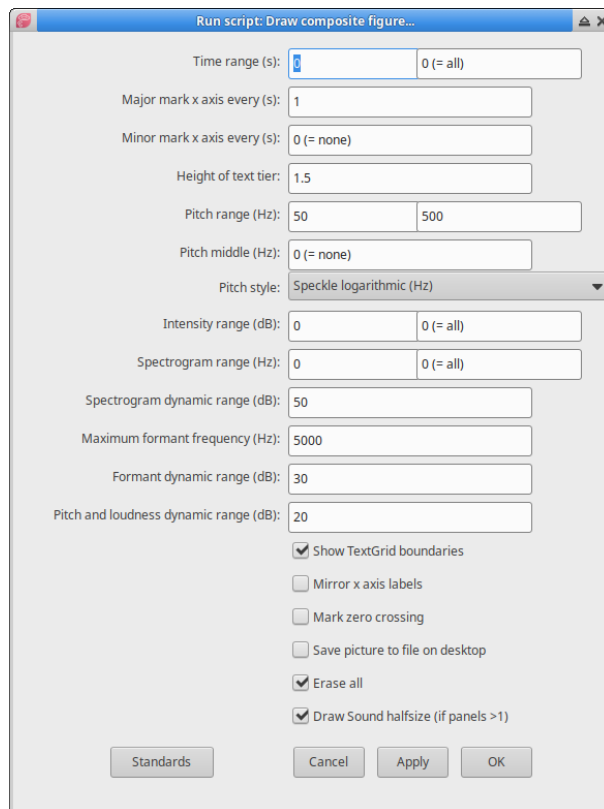
The script can be run from the ScriptEditor window, via the **Run** menu and the **Run** command:



(Alternatively you can create a button in a Praat menu to run the script: see the Praat manual.)

The script can draw a waveform, a spectrogram, formant tracks, a pitch trace (various types), an intensity trace and a TextGrid, or any subset of those. The script will attempt to draw whatever objects you have selected in the List of Objects in the Objects window when you run the script. The Objects can be created in various different ways (e.g. by loading in files, by running commands in the Objects windows, by running commands in editor windows etc.: see the Praat manual). If the Objects you want to select are next to each other in the List of Objects then you may be able to select them by clicking and dragging; if they are not next to each other then you may need to press the Control key as you select the Objects.

When you run the script a dialogue box appears.



Run script: Draw composite figure...

Time range (s):  0 (= all)

Major mark x axis every (s):

Minor mark x axis every (s):

Height of text tier:

Pitch range (Hz):

Pitch middle (Hz):

Pitch style:

Intensity range (dB):

Spectrogram range (Hz):

Spectrogram dynamic range (dB):

Maximum formant frequency (Hz):

Formant dynamic range (dB):

Pitch and loudness dynamic range (dB):

☒ Show TextGrid boundaries

☐ Mirror x axis labels

☐ Mark zero crossing

☐ Save picture to file on desktop

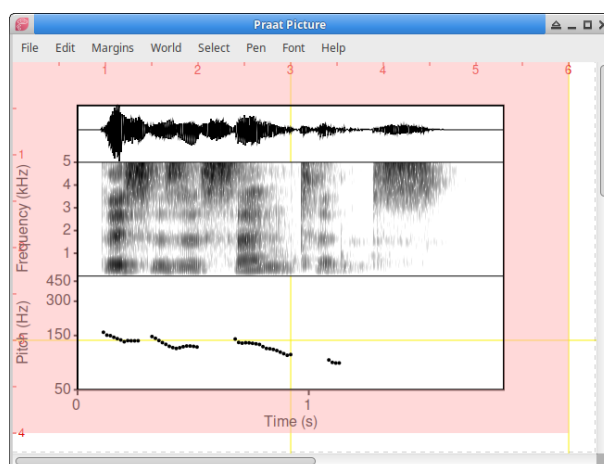
☒ Erase all

☒ Draw Sound halfsize (if panels >1)

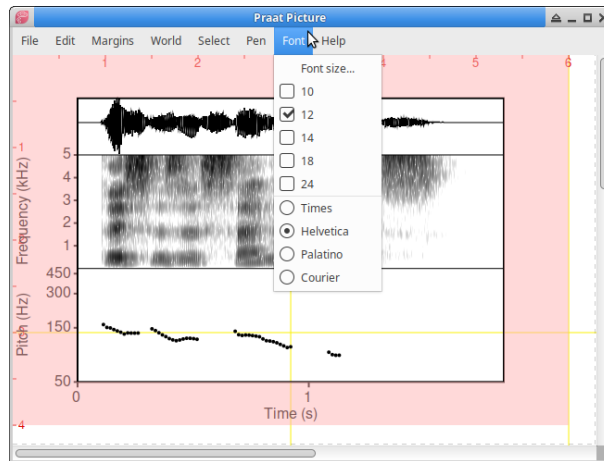
This box lets you change various settings, described in the next section. If you find that you are often changing the values in the dialogue box to the same value, you could change the default values by editing the script: see the “drawing options” section of the script itself.

With the Objects you want to draw selected in the List of Objects in the Objects window, click **Apply** or **OK** in the dialogue box (**OK** runs the script and closes the dialogue box; **Apply** runs the script and leaves the dialogue box open).

If you have a Sound, Spectrogram and Pitch Object selected, an image something like this will be drawn to the Picture window:



The image can be saved as a publication-ready graphic via the **File** menu in the Picture window. The size of the image is set by the pink box in the Picture window. This can be changed by clicking and dragging in the Picture window before running the script. The font size and style can be set via the **Font** menu in the Picture window:



### 3 Script options

This section describes the options available in the dialogue box. Some options may relate to types of Object you aren't trying to draw, in which case they can just be left alone.

**Time range (s)** The range of times you want to draw, in seconds. Default: draw all.

**Major mark x axis every (s)** How often to draw ticks on the x-axis, in seconds. Default: 1 s.

**Minor mark x axis every (s)** How often to draw smaller unlabelled ticks on the x-axis, in seconds. Default: 0 s (no minor tic marks).

**Height of text tier** Adjust the height of the text tier. Default: 1.5.

**Pitch range (Hz)** Minimum (left) and maximum (right) pitch values to draw. Default: 50 Hz, 500 Hz.

**Pitch middle (Hz)** Add a mark between the minimum and maximum pitch value (e.g. to indicate some kind of average). Default: 0 Hz (no middle value)

**Pitch style** Various different type of pitch trace. Options: Speckle linear (Hz); Speckle logarithmic (Hz); Speckle semitones (re baseline); Draw linear (Hz); Draw logarithmic (Hz); Draw semitones (re baseline); Speckle linear pitch and loudness (Hz); Speckle logarithmic pitch and loudness (Hz); Speckle semitones pitch and loudness (re baseline).

Note: 'baseline' is set by the left (minimum) value in the "Pitch range (Hz)" option; the 'pitch and loudness' styles require a Pitch and Intensity Object to be selected when running the script.

**Intensity range (dB)** Minimum (left) and maximum (right) intensity values to draw. Default: draw from the minimum to the maximum values.

**Spectrogram range (Hz)** Minimum (left) and maximum (right) frequency values to draw for a spectrogram. Default: draw from the minimum to the maximum values, i.e. draw the whole spectrogram.

**Spectrogram dynamic range (dB)** The range of values drawn as shades of grey in the spectrogram. Default: 50 dB.

**Maximum formant frequency (Hz)** Minimum (left) and maximum (right) frequency values to draw for a Formant object. Default: draw from the minimum to the maximum values.

**Formant dynamic range (dB)** The range of values drawn from the formant object. Default: 30 dB.

**Pitch and loudness dynamic range (dB)** The range of pitch values drawn as shades of grey when using any of the 'pitch and loudness' pitch styles. Default: 20 dB.

**Show TextGrid boundaries** Draw dotted lines across the figure corresponding to boundaries in a TextGrid. Default: on.

**Mirror x axis labels** Draw x-axis labels along the top margin as well as the bottom. Default: off.

**Mark zero crossing** Draw a dotted line at zero in the waveform.

**Save picture to file on desktop** Saves a PDF file of the graphic to the desktop. The script may need to be edited set an appropriate path to your desktop before running the script. Default: off.

**Erase all** Clears the Picture window before drawing. Default: off.

**Draw Sound halfsize (if panels > 1)** Reduces the size of the waveform if one or more other panels (e.g. spectrogram, pitch trace, intensity trace, formant tracks) are being drawn. Default: on.