

# IMPROS – Improve Your Prosody V1.0

## *How to Author Lessons and Exercises for IMPROS*

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### 1. Lesson and Exercise Files

Each IMPROS *exercise* is made up of two files: an AUDIO file containing the speech waveform and a TEXT file containing the exercise instructions, the waveform annotations and the pitch contour. The two files share the same filename apart from the file extension. The extension will usually be .wav or .mp3 for the audio file, and .txt for the text file.

Each IMPROS *lesson* is made up of a set of exercise files that have a common set of filenames that only differ according to a trailing number.

Here are the files that one might need to create for a lesson containing 3 exercises on pronunciation:

pronunciation1.wav	pronunciation1.txt
pronunciation2.wav	pronunciation2.txt
pronunciation3.wav	pronunciation3.txt

### 2. The IMPROS Authoring Tool

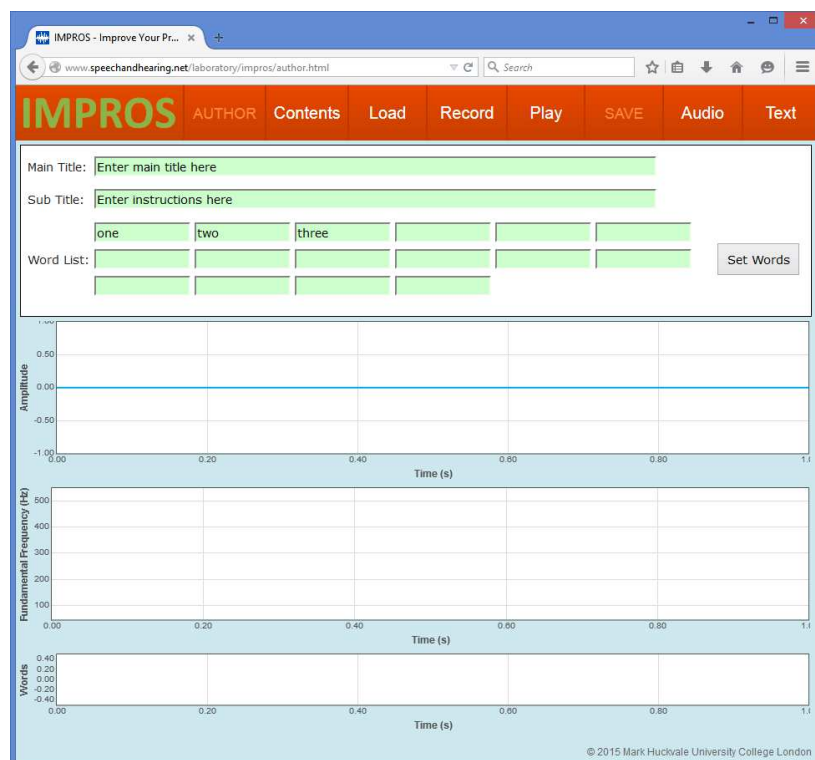
The IMPROS authoring tool can be used to author an exercise:

<http://www.speechandhearing.net/laboratory/impros/author.html>

However the outputs of the authoring tool are just an audio file and a text file, so other methods may be used to create them.

A screenshot of the authoring tool is shown below. You should see the following important elements:

- Menu Bar
- Text boxes for exercise title and instructions
- Text boxes for word labels
- Waveform display
- Pitch display
- Word alignment display



The menu bar functions are as follows:

- Contents: returns to the main IMPROS home page
- Load: uploads an audio file into the waveform and pitch displays
- Record: records a new utterance from the local microphone into the waveform and pitch displays
- Play: plays the currently displayed audio
- Audio: downloads the edited audio file for the exercise
- Text: downloads the authored text file for exercise

The text boxes are used as follows:

- Main Title: enter here the main title for the exercise. This will typically be the exercise utterance, but this is not a requirement.
- Sub Title: enter any other text or instructions to display underneath the main title when the exercise is being run.
- Word List: enter here the list of words to make up the “blocks” in the IMPROS exercise. One text box = one block.

### 3. Authoring an exercise

1. First upload an existing recording using the ‘Load’ menu option, or make a new recording using the ‘Record’ menu option. The first time you record with the authoring tool, the browser will ask you to confirm that you are willing for the tool to access your microphone.
2. Check that the displayed pitch track is satisfactory. If the track has an odd shape consider re-recording the audio. Generally better quality audio recordings give rise to better pitch tracks.
3. Next, complete the text boxes representing the main title, sub title and word list.

4. Press the “Set Words” button to copy the word list into the word annotation area. The display should now look like this:



5. Adjust the boundaries of the words in the annotation area so that they align with the words in the recording. You can drag the word boundaries with the mouse by clicking and dragging with the left mouse button. If you click on the word annotation, you will be able to hear the audio segment to which it is currently aligned. After alignment, your display may look like this:



6. Once you are happy with the word alignment, download the audio using the Audio menu option. This will remove unused silence at the start and end of the audio recording. The downloaded file will appear in your usual downloads folder. You will now need to move the downloaded file to the destination folder for the lesson and rename it according to the name of the lesson and the number of the exercise.
7. Finally download the text file using the Text menu option. The downloaded file will appear in your usual downloads folder. You will now need to move the downloaded file to the destination folder for the lesson and rename it according to the name of the lesson and the number of the exercise.
8. You can now author another exercise. There is no need to reload the authoring application between exercises.

#### 4. Linking to the IMPROS application

Once the files for the lesson have been prepared, you can call the IMPROS main application to display the lesson or to display one specific exercise within the lesson.

First upload the lesson files to the web server in a folder accessible to the IMPROS web application. A good choice would be a folder beneath the folder holding the IMPROS web application.

In your web page calling the web application insert a link like the following:

```
<a href="impros.php?home=index.html&base=audio/lesson&nlsn=3&curr=1">Exercise 1 - Practice</a>
```

You will see a number of elements in the link:

Element:	Description:	Default if not specified:
impros.php	the name of the IMPROS web application file	N/A

home	the name of the page to display when the Contents menu option is selected	index.html
base	the base name of all the exercise files in the lesson. The actual files should be called <i>basename1.wav</i> , <i>basename1.txt</i> , <i>basename2.wav</i> , <i>basename2.txt</i> , etc.	exercise
nlsn	the number of exercises in the lesson	1
curr	the number of a specific exercise to display	1

Modify the values given to the elements to control which lesson and which exercises are displayed. The user can navigate between the exercises within the IMPROS web application by using the Next and Prev buttons, however they must return to the Contents page to select a different lesson.