

A User's Manual for
Speaker Identification
using Multi-Layer Perceptron Neural Networks

by

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Chapter 1

Installing Matlab

Run setup on your computer and install matlab at your root directory or C. After installing, copy the SID folder into your C \Matlab\work directory. Run matlab. Open the path browser and add the path C \Matlab\work\SID. Save.

Chapter 2

Starting the program

Open Splash0. Run Splash0 to display the program's splash screen

Upon clicking the OK button (note: all buttons are clickable only by mouse), the main menu will be displayed on the screen

(see Fig. 2.2.)

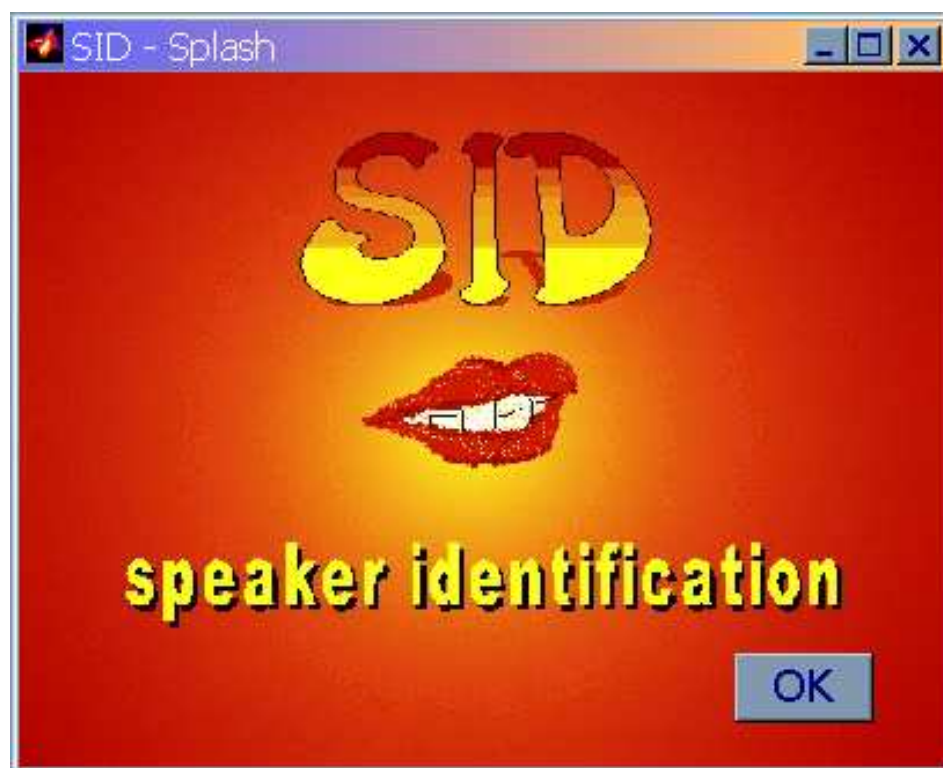


Figure 2.1:

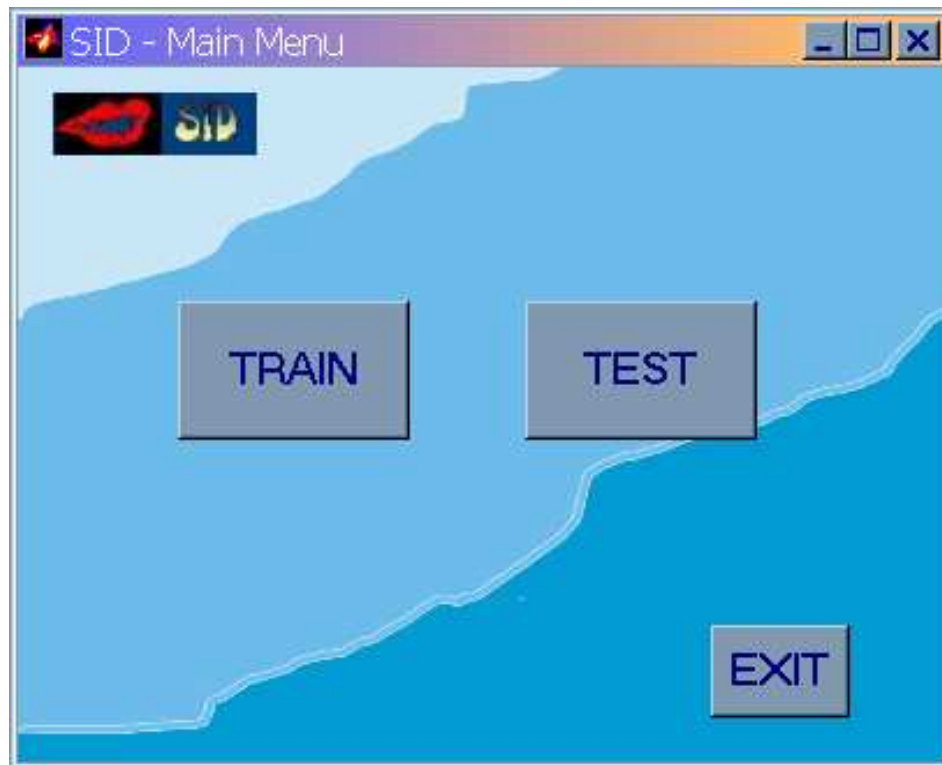


Figure 2.2:

Chapter 3

Choosing Options

3.0.1 Training

Upon clicking the button Train, the training parameters are immediately asked from the user. These parameters include the number of speakers to be enrolled (numenrollees), number of words to be uttered (numwords) and the number of samples per word (numsamples). If the database already exists, the values of numwords and numsamples will be automatically displayed on screen after getting the value of numenrollees since these are fixed. If the database does not exist, all three parameters will be asked from the user.

(see Fig. 3.1.)

But if there is an existing database already:

(see Fig. 3.2.)

After getting these parameters, the user is asked to enter the names and login names of the enrollees, until it reaches the value specified in numenrollees.

(see Fig. 3.3.)

Then the user will be asked to enter the words to be uttered (same number as

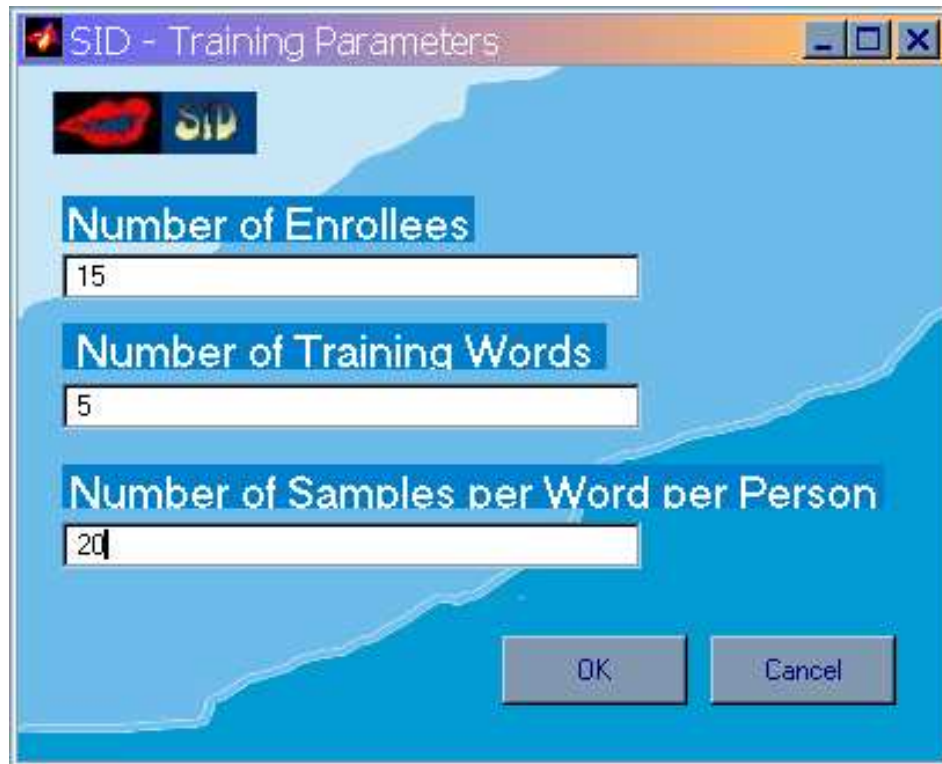


Figure 3.1:

specified in numwords).

(see Fig. 3.4.)

After obtaining all of the specified information, a reminder will be displayed on screen showing all the words that you entered and the specifications of how and where to save your voice samples.

(see Fig. 3.5.)

Pressing OK, will make the program start training. It will be a long wait. For example, it will take this program about 12 hours to train 4 persons with 5 words of 20 samples each. After the training is done, a note will be displayed on screen

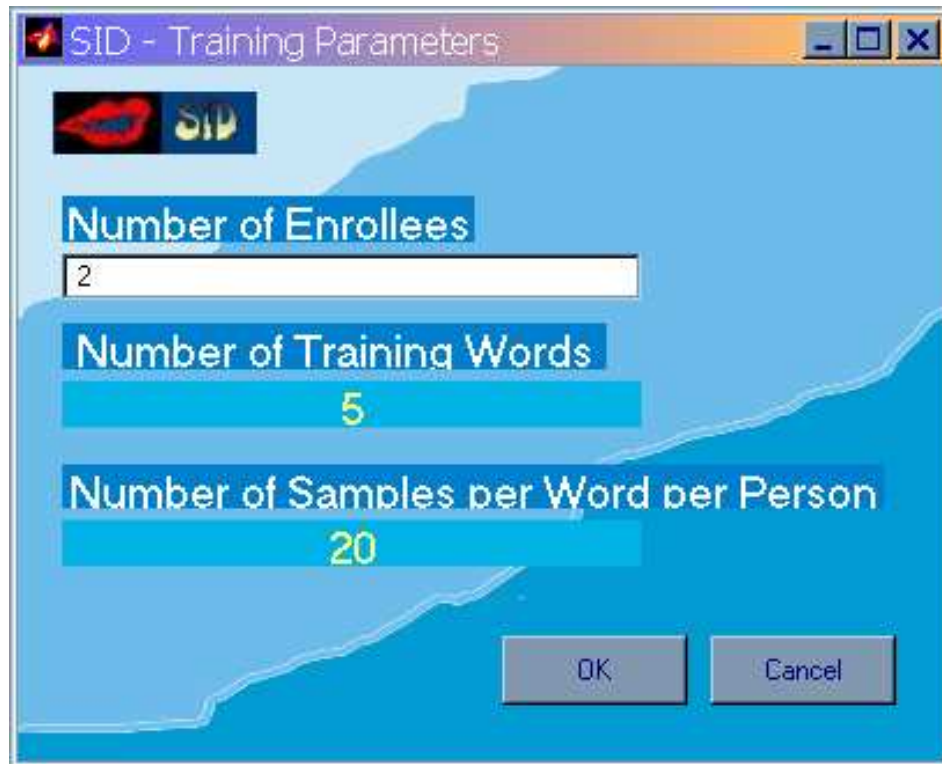


Figure 3.2:

indicating that the training is already completed.

(see Fig. 3.6.)

Clicking OK will bring you back to the main menu.

3.0.2 Testing

Upon clicking the button Test, the WAV files for every utterance of each word should be made inputs by opening the files from the path C:\Matlab\work\ SID\Data\testing_samples.

If the testing is successful, the persons identity will be displayed on the screen

(see Fig. 3.7.)



Figure 3.3:

If the person is deemed not a match among the voice samples in our database, then it will be displayed so in the screen.

(see Fig. 3.8.)

Clicking OK will bring you back to the main menu.

3.0.3 Exiting the program

Upon clicking Exit, all files will be closed including the whole Matlab environment.



Figure 3.4:



Figure 3.5:



Figure 3.6:



Figure 3.7:



Figure 3.8: