

# Lab2 part 1:

## Concatenative diphone "synthesis"

### Objective

- The students should be more familiar with the steps in concatenative synthesis of diphones.

### Software

- Wavesurfer. (Download the program:  
<http://www.speech.kth.se/wavesurfer/index.html>)  
There is a manual here Manuals:  
<http://www.speech.kth.se/wavesurfer/man.html>

### Task

- The task is to create the sentence "Dom flyttade möblerna", using diphones from a (very small) diphone database.

# Step by step guide to synthesizing the sentence

1. Record the "database", the word list:  
"Dockad, yttern, töm, flöde, möta, lätt, blomster, lyssnarna."  
in one go, in that order and without pausing (why? hint: see step 4.) and with neutral intonation (why?).  
If you prefer, you may instead choose to record the words with changing intonation or emotion to see what this means for the final sentence.
2. Segment the wordlist into diphones:  
Cut out each diphone and put them in a new Wavesurfer window, but with pauses separating each diphone.
3. Identify the diphones that you need to create the sentence  
"Dom flyttade möblerna."
4. Copy and paste diphones from the database window into a new synthesis window.
5. Play the sentence, fine tune durations and concatenations.

# Reporting

- Submit the three wav-files with the original recording, the diphone "database" and the resulting "synthesis" by email to [jocke@speech.kth.se](mailto:jocke@speech.kth.se) together with a short report where you explain the steps that you have done and how your "synthesis" differs from actual diphone synthesis and discuss the weaknesses of this simple synthesis (in terms of e.g., concatenations, segmentation, equalization)