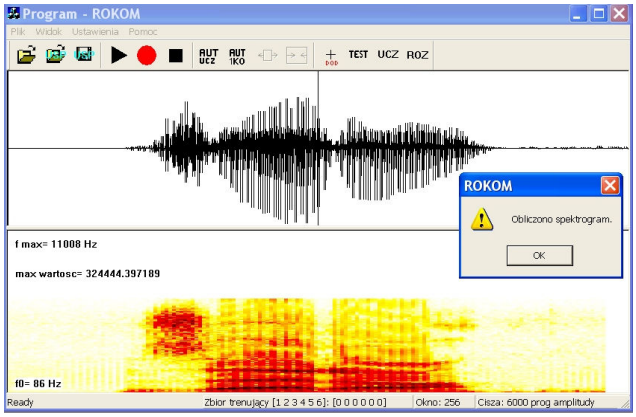
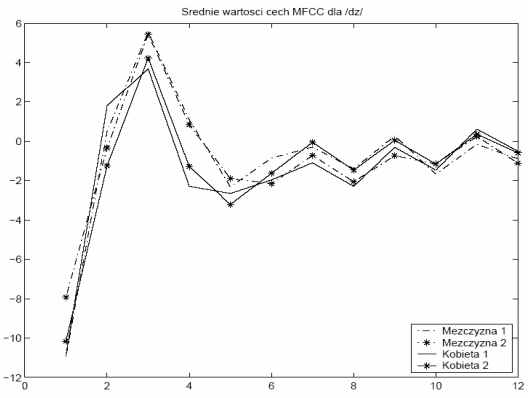
# Project 7 (2 persons)

## Evaluation of the MFCC- and LPC-features of speech signal frames




Following steps should be performed:

1. (P1) Read and write a .wav file, acquire different learning samples of spoken digits – write them as .wav files. Perform initial segmentation into phonemes and silence. Present the waveform and the 2-D spectrogram in graphic windows.
2. (P2) Perform the windowed Fast Fourier Transform (FFT). Present the spectrogram image.
3. (P1) Detect the MFCC-features for speech frames.
4. (P2) Detect the LPC-features for speech frames.
5. (P1, P2) Make a statistical analysis of two sets of features, computed for given learning set – means, variances for all considered sub-phonemes (classes), minimum and average distances between classes and the Fisher information for complete sets.
6. (P1, P2) Present the results of comparison in a graphical user interface, i.e. 2-D and 3-D drawings of feature distributions, tables of comparison data. Prepare a final report.