

CEN645: Digital Speech and Video Signal Processing

1430-31H, 1st Semester

Department of Computer Engineering, CCIS, KSU

Assignment#1

Problem: Select three frames each from a voice onset, voiced (middle), and voice offset part of an Arabic vowel speech. The frame length should be 25 millisecond. For all frames, plot the MATLAB output of the followings sequentially:

- (a) After Hamming window.
- (b) After FFT.
- (c) After applying logarithm.
- (d) After applying Mel-scaled 24 band-pass filters.
- (e) After applying DCT.
- (f) Power from the raw signal and 0-th cepstral coefficient.

Now add (i) vehicle noise and (ii) babble noise at SNR = 0 dB to all the three frames. Then plot (a) – (f) for all these noisy frames.

Make comment on your result.

Last date of submission: November 11, 2009 (Wednesday). Submit it by both softcopy and hardcopy.