

ECTE901 Assignment – Autumn 2006

Dear ECTE901 Students:

You are required to do an assignment during the second half of this session. The assignment requires that you perform some research on one of the specific topics given below. The details are as follows:

1. Topics

Please choose two topics from the following list, indicating No 1 and 2 as your preference. I will let you know my decision on the topic you should work on:

- a. Complex (DFT) modulated filter banks: history, theory, implementation and applications;
- b. Real (Cosine) modulated filter banks: history, theory, implementation and applications;
- c. Wavelet transforms: history, theory, implementation and applications;
- d. Transform-based image coding: history, theory and implementation.

2. Requirements

- a. History: work out the detailed history of the topics by literature review;
- b. Theory: express the theory in your own words;
- c. Implementation: develop Matlab programs to implementing the technology and test the programs.
- d. Applications: list the applications in general, and describe a couple of applications in details.

3. Assessment

- a. History (20%), theory (20%), Implementation (30%) and Applications (30%)
- b. A report based on your work of about 30-35 pages should be submitted to the school office at 35.G43. Deadline for report submission is 4.00pm, Friday, Week 13 (May 26, 2006).