SGN-3057 Digital Image Processing II

Homework: Subjective Image Quality Assessment

Description:

This homework is aimed to carry a subjective image quality evaluation. Currently, it is the most widely used method to study the influence of various image distortion such as noise, or results of applying different image processing methods to a human visual system (HVS).

In this homework, you are requested to do 2-3 experiments. The deadline is 4 March, 2013.

The following shows instructions for one experiment. Please read carefully before doing an experiment.

1. Sit in front of the screen. Screen resolution should be not less than 1152x864. You can use your own computer connected to TUT internet or computer in Signal Processing Laboratory, e.g. TC407, TC303.

2. Wear any viewing device you need. Be at comfortable seating distance from the monitor. Carry out experiments in good illumination conditions.

3. Click the link: http://tid2013.cs.tut.fi/ , you will see
**Step 1:** Insert your student number in the box ‘Your name’ with ‘-A’, ‘-B’ and ‘-C’ for your first, second and third image set experiment, respectively.

For example, if your student number is 123456,
123456-A: indicate your first experiment,
123456-B: indicate your second experiment,
123456-C: indicate your third experiment.

**Step 2:** Keep or change (by typing a number from 1 to 25) an automatically randomly selected image set in the box ‘Image set’.

**Step 3:** The experiment now can be started by clicking the button ‘Start new experiment’:
  a. In the bottom part you will be shown the original image.
  b. In the upper part there are two distorted images.

**Step 4:** Click on the distorted image you think is more similar to the original one.
Please use 2-3 seconds (not more) for each selection. If the quality of the two distorted images is comparable please click on any of them.

4. During one experiment you will need to perform 540 comparisons.
   A bar in the upper part indicates a percentage of already performed comparisons.
5. Total duration of one experiment is about 30 minutes. Please have at least ten minutes rest to carry out the next experiment.

6. When an experiment is completed you’ll see the message: “The experiment is completed”. After pressing "OK" button results of the experiment will be transferred to a database.

For any questions, please contact with Lina Jin, TE413, lina.jin@tut.fi.