

## Exercises for Multimedia Databases

### Sheet 3 (until 19.11.2009)

Please note that you need **50%** of all exercise points to be admitted for the final exams. Exercises have to be turned in until **Thursday** before the next lecture and should be completed in teams of two students each. Write both names and “Matrikelnummer” on each page. If you have multiple pages, staple them together! Please hand in your solutions on **paper** into the mailbox at the IFIS floor or to our secretary (Mühlenpfordtstraße 23, 2<sup>nd</sup> floor). You may answer in either German or English.

#### Exercise I: (20 P)

Consider the following images:

1. [http://www.treehugger.com/s\\_airplane8.jpg](http://www.treehugger.com/s_airplane8.jpg)
  2. <http://justinnewitter.com/stock/Tennisball.jpg>
  3. <http://www.electronicplanet.ch/Praxis/werkzeug/schraub.jpg>
  4. <http://www.wimo.com/bilder/buddipole-stativ2.png>
  5. <http://www.bvr-nt.de/images/Rossdorf-Satellitenbild.jpg>
  6. <http://www.hochzeits-feier.de/images/kirche.jpg>
  7. <http://www.chsforever.org/Images/Black%20Panther%20.jpg>
- a) Calculate the threshold of each of the seven mentioned images, by using the isodata algorithm. **(10 P)**
- b) Extract the left and right side of each image according to its threshold, and express your opinion towards the syntactic quality of the resulting 2 image parts (which images were successfully segmented and which not) **(7 P)**
- c) Look at the images and at the histograms and find yourself a threshold you think fits each image. **(3 P)**