Multimedia Communication Systems 2

Multimedia Content Analysis

Mini Project 2: Texture analysis

Download and extract “MP2_Texture_analysis.zip”

In this exercise you will learn how spectral features like the ring- and ray spectra can be used for texture analysis.

- Complete the function ray_powerspectra and ring_powerspectra which calculate the corresponding spectra (see book chapter 4.2.3).
- Start the demo.m file to see the results. This will show the original image, the image for comparison, the fourier spectra of both images, and the ray- and ring spectra.
- Load the rotated and the upscaled version of the image in comparison to the original image. How do rotation and scaling affect the ring- and ray spectra and why?
- Load the other test image (D085) and see how this compares to the original.

Files:

D106.png	- The original test image
D106rot.png	- The rotated test image
D106upscaled.png	- The upscaled test image
D085.png	- Another test image
plot_powerspectra.m	- Plot the powerspectra of a given image
ray_powerspectra.m	- Calculate the ray powerspectra for a given image
ring_powerspectra.m	- Calculate the ring powerspectra for a given image
demo.m	- Start the demo

Feedback or Questions?

You can contact us via e-mail or visit us at the *Institut für Nachrichtentechnik* during our office hours.