Audio Coding - Practice Lessons

Seminar 5 –Huffman Coding

Homework Assignment 5

Goal:

- Get maximum compression without loss of audio quality (i.e., audible quantization noise)

How to achieve that:

- Apply Huffman coding to efficiently save your bitstream
- Be creative in terms of codebook

Homework Assignment 5

Task:

- Take an arbitrary Huffman codebook (Lecture 6/Internet/etc.) and encode the subband values of each signal block with it (take a look at the attached Grundlagen der Videotechnok lecture 7, pages 6 (how to define codebook) and 11 (how to pack bitstream))
- Save the resulting bitstream (all blocks) as binary file and compare its size to the file from Homework 4 (number of bits per sample)
- Decode the bitstream with your codebook and proceed with the blockwise synthesis

- **don't use the Python integrated functions**

- The ones who want to generate an own codebook will find help on: https://www.cs.cf.ac.uk/Dave/Multimedia/node210.html