In a system for binaural synthesis, source signals are convolved with HRIRs. For ambisonics, instead of every single source signal, loudspeaker signals are con- volved with HRIRs. In this content, HRIR measurements of FH Köln are imple- mented to the system for playback in headphones.[7]

Among other measurements, KU100 HRIR Dataset Spherical - Gauss 2 Stepsize was picked for binaural rendering. This dataset has a separate HRTF metric for ev- ery two degrees. For each sound source, an accurate Impulse Response ID should be chosen. For those between the two degrees in the dataset, the next nearest HRTF can be selected.

For this system, according to the positions of the different sound sources, the ap- propriate ID of HRIRs are selected and convoluted with sound signals belong to these IDs. These locations are determined by the azimuth and elevation angles of each sound source. Next, according to the chosen Ambisonics loudspeaker layout, HRTFs were chosen according to the locations of the loudspeaker signals.

At the end of these proceedings a binaural recording is ready to listen through a headphone.