An Impulse Response Dataset for Dynamic Data-based Auralisation of Advanced Sound Systems

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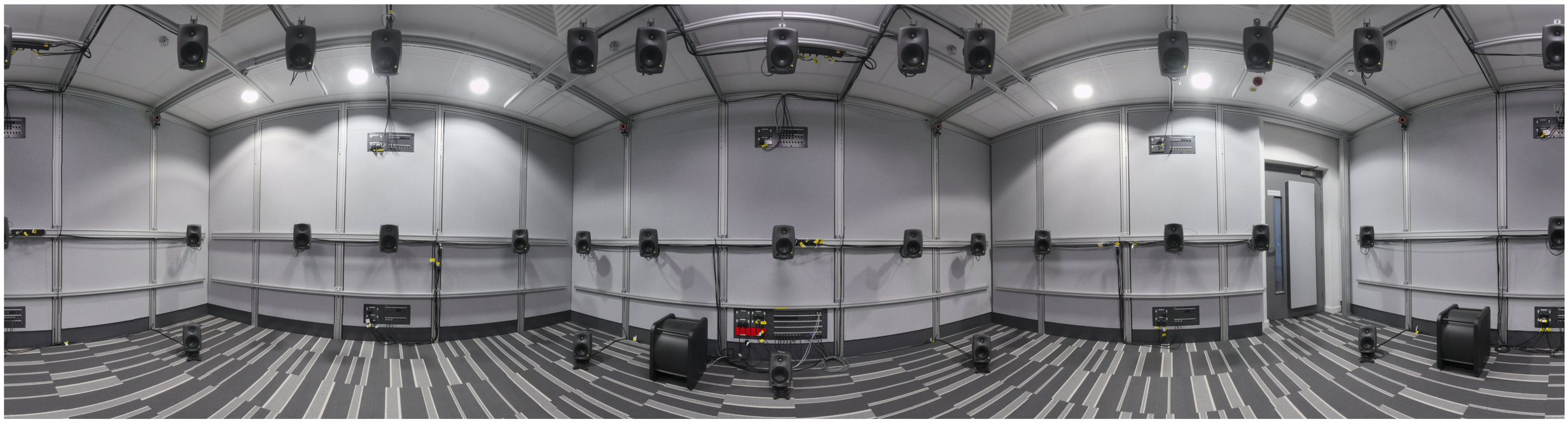
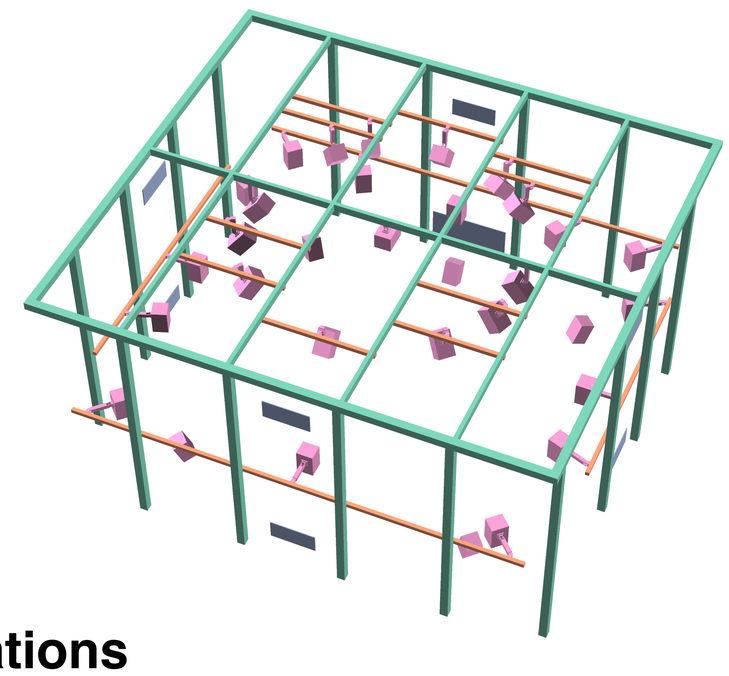
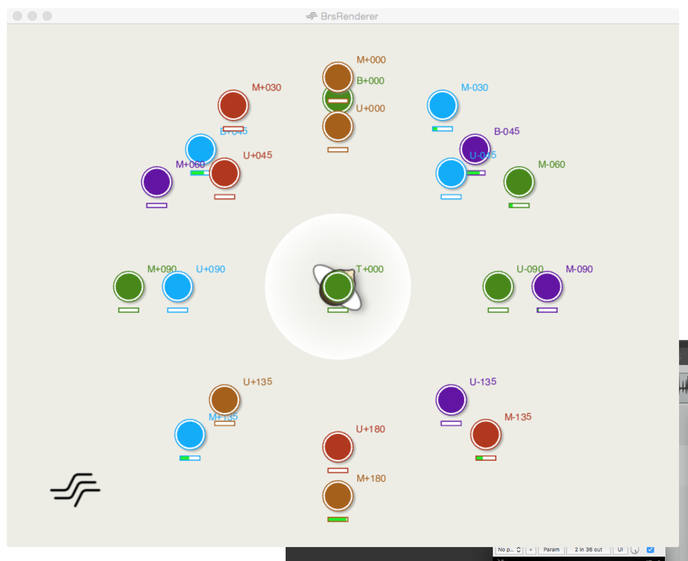
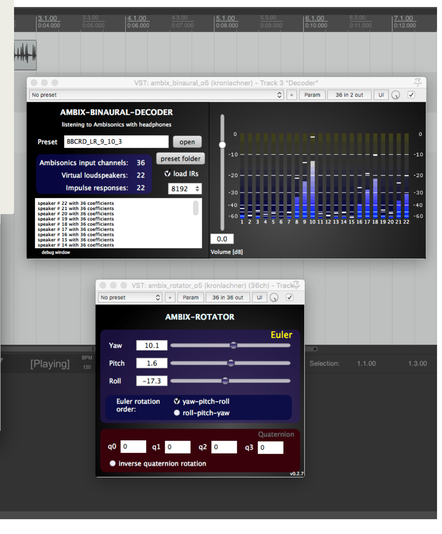




Applications

The dataset can be used for dynamic data-based auralisation (i.e. head-tracked binaural rendering) of multichannel loudspeaker signals. For example for headphone monitoring of signals from an “advanced sound system” as in ITU-R BS.2051, i.e. a system that can render speaker signals from channel-based, object-based and/or scene-based content. It can also be used for binaural analysis of such content.





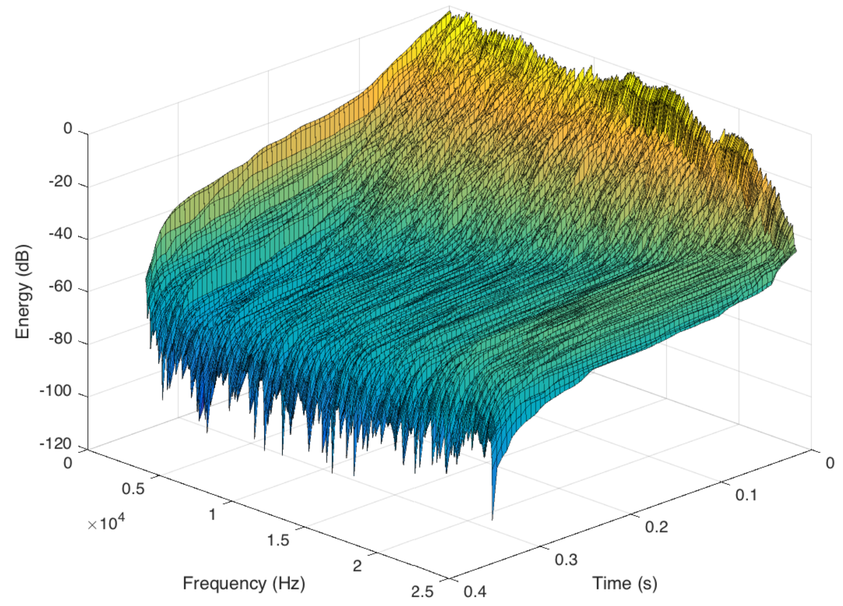
Measurements

Binaural room impulse response (BRIR) dataset measured on a 32-channel 3D loudspeaker system.

Includes the loudspeaker layouts specified in Recommendation ITU-R BS.2051 (from stereo to 22.2).

Measured in BBC R&D’s ITU-R BS.1116-compliant listening room using a Neumann KU100 dummy head.

Measured at 2° steps of rotation of the dummy head.



Availability

The dataset is made freely-available in the SOFA file format (AES69).

Configuration files are also provided for both the SoundScape Renderer and the AmbiX plug-ins.

This allows dynamic auralisation of multichannel loudspeaker signals (up to 22.2) and higher-order ambisonics (up to 5th order) respectively.

The dataset is freely-available under the Creative Commons Attribution-ShareAlike 4.0 license.

github.com/bbc/bbcrd-brirs