

1. Public Executive Summary

WP6 Task 3 is devoted to exhibition systems for spatialised audio play-out, and suited formats and standards for the 3D audio content. Barcelona Media Audio has produced a proposal for a spatial audio format, suitable for distribution which is independent of the exhibition system. At the playback location, the user can introduce (or measure) data of his multi-loudspeaker setup, and perform a decoding tailored for his system. This method is based on a separation of those parts of the soundtrack that require very narrow localisation from those that do not; once the soundtrack is divided, different decoding algorithms are applied to each group of tracks. Barcelona Media Audio is at the moment producing content that can be treated and exhibited in this manner, which is to provide a ground test to test the viability of this procedure, and to compare it with other state of the art alternatives.

Barcelona Media Audio has mounted a small experimental 3D setup, consisting of 16 loudspeakers, which has been used to test, not only the aforementioned encoding/decoding methods, but also to compare the viability of different 3D setups for exhibiting cinematographic content. This experimental setup is flexible enough to allow for quick modification of the loudspeaker positions to test different configurations.

Some 3D audio content has already been produced and informal evaluations carried out. The main conclusion so far is that sound produced using a 3D loudspeaker layout and appropriate coding and encoding techniques drastically improves the immersive sensation. The next steps will include adding decoding techniques for highly-directional audio, performing systematic users tests, and testing the setup in a real theatre environment

For more information about this documents, please contact: info@20203dmedia.eu.