

Audio for Virtual Reality
Professor Jens Ahrens
Division of Applied Acoustics
Chalmers Institute of Technology
Challenges with Projection-based Systems

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Independent of what method is being used and how many loudspeakers are being used, projection-based systems, they follow, they pose the following challenges.

And the surfaces that are used for the projection, for example this screen, these surfaces they are very reflective. So that whatever sound field loudspeaker radiates, that is mounted somewhere in the system will be reflected off the projection screen and the user would be exposed to this reflection

And especially if there are several, if the user is surrounded by projection surfaces then many, many reflections will occur and a complicated sound field will evolve, which will impair the perception, and particularly with systems that have projection surfaces that enclose the user

There will also be strong acoustic resonances inside that space that is surrounded by the reflecting surfaces so that funny amplification, especially of low frequencies can occur and this can also impair the experience but there is simply no way to avoid this.