

How behind-the-scenes sound mixing makes movie magic

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Modern movie sound mixing uses techniques like impulse responses to reproduce dialogue and other sounds. These methods are crucial to align what moviegoers see and hear and keep them engaged in the story. At

the 183rd ASA meeting, Jeffrey Reed of Taproot Audio Design demonstrated the behind-the-scenes audio engineering required to re-create the acoustics of movie sets and locations, sharing short clips of film to compare the original recording to the studio mixed product.

If you've ever watched a movie where the audio is out of sync, it quickly becomes obvious that smooth, consistent [sound](#) is critical for movie enjoyment, especially during dialogue. Even slight discrepancies in [background noise](#) can disrupt a moviegoer's experience.

At the meeting of the Acoustical Society of America, Jeffrey Reed of Taproot Audio Design demonstrated the behind-the-scenes audio engineering required to re-create the acoustics of movie sets and locations. During the session, "Modern movie sound: reality and simulated reality," Reed shared short clips of film to compare the original recording to the studio mixed product.

"Nearly everything you hear in a film has been added later or enhanced for effect. Consistency in background noise has a major impact, especially on dialogue in a movie," said Reed. "Sometimes every single line of dialogue in a scene can have a different noise profile—the sound in the background varies and makes the sound choppy and disjointed. It's up to us to smooth that out."

Modern movie sound mixing uses techniques like impulse responses to reproduce dialogue and other sounds. These methods are crucial to align what moviegoers see and hear and keep them engaged in the story.

An impulse response is a short recording that allows audio engineers to re-create the acoustics of a room. Sonic qualities are recorded when a sound reverberates off the unique layout of a space. The impulse recording is then applied to the audio mix to digitally re-create the sound of that space and make the resulting scene of a film as believable as

possible.

"There are a lot of moving parts to a film mix, from dialogue, effects, and the ever-important musical score," said Reed. "Each and every one is crucial to a film, and the joy of mixing is finding out what needs to be where at the right time. When it's all said done though, [dialogue](#) is king in a film mix and everything must carefully revolve around it."

More information: Conference: acousticalsociety.org/asa-meetings/

Provided by Acoustical Society of America

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