

Algorithms to improve user-generated recordings

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Credit: Wikipedia.

Sound quality on phones, video recorders and dictaphones is often poor; distorted or noisy with garbled speech or indistinct music.

Now, acoustic scientists at the University of Salford have developed new algorithms to improve user-generated recordings, after tests revealed the extent to which consumers are struggling to control quality.

A team led by Professor Trevor Cox asked thousands of volunteers to explain what they thought was interfering with the quality of sound on clips recorded in living rooms, on the street and at gigs, including at the Glastonbury Festival.

"People are often disappointed when they play their recordings back, after a concert or a party, but there is a real lack of understanding as to why," explains Cox, professor of acoustic engineering and author of *Sonic Wonderland*.

"It could be microphone handling noise, distortion, wind noise or a range of other conditions. What we have worked out is a way of automatically assessing the relative impact of these sound errors."

The algorithms, which makes it possible to tag content and quality, has already been applied to an app for assessing wind noise, which alerts the user when there is significant risk of the sound being affected.

The three-year Good Recording Project, led by Salford University, is a response to increasing demand from consumers and from broadcasters who often use amateur footage which is compromised by [sound quality](#).

"We're used to having visual processing improving our photos, such as the camera that spots faces and changes exposure, but we have not had the same tools to do the audio equivalent, added Cox.

Rapid quality assessment could determine whether the [sound](#) is of broadcast quality without time consuming manual auditioning.

More information: Paul Kendrick et al. Microphone Handling Noise: Measurements of Perceptual Threshold and Effects on Audio Quality, *PLOS ONE* (2015). [DOI: 10.1371/journal.pone.0140256](https://doi.org/10.1371/journal.pone.0140256)

Provided by University of Salford

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