

## Pinpoint 'flicker sound' increases awareness of digital signage advertisements

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Credit: AI-generated image (disclaimer)

Digital signage serves as an electronic bulletin board, displaying a range of information, including advertisements. However, with an inundation of visual information, such signage often gets lost in the clutter, making it hard for people to notice it—a phenomenon known as "display blindness."



One potential solution is to incorporate sound into the signage. However, if the sound reaches individuals far from the signage or those not looking at it, it could create an intrusive noise, disrupting the comfort of the space. Thus, a balance must be struck between enhancing awareness and maintaining spatial comfort.

Addressing this issue of display blindness and the need for spatial comfort, researchers have proposed a "pinpoint flicker sound" system for digital signage. This system plays a brief, targeted sound to those passing near the signage to alert them to its presence. Thereafter, the sound is only audible to those who are actively viewing the signage.

The system was tested on 33 participants in a simulated store environment. Results indicated that the pinpoint flicker sound encouraged participants to pay more attention to the signage, and they continued looking at it for longer periods. Importantly, bystanders were less likely to perceive the sound as noise, suggesting that the system managed to maintain a comfortable spatial environment.

In conclusion, the pinpoint flicker sound system not only heightened the awareness of signage advertisements but also preserved the comfort of the space. As such, it holds promise for the future of spatial sound design. It benefits not only advertisers and <u>signage</u> users, but also ensures a comfortable environment for everyone in <u>public spaces</u>.

The study is published in the journal IEEE Access.

**More information:** Noko Kuratomo et al, Attracting Effect of Pinpoint Auditory Glimpse on Digital Signage, *IEEE Access* (2023). DOI: 10.1109/ACCESS.2023.3270909



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