UNIVERSITY OF MINNESOTA
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Customizable Acoustic Environment

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Sound Diffusion and Absorption

A new wall and ceiling panel design can transform hard-surfaced spaces into quieter areas. Echoes and feedback from hard surfaces can be softened with an innovative vacuum formed topographical surface panel. This variable vacuum formed wall creates a customized acoustic environment by diffusing and dispersing sound along its length and even absorbing sound in specific locations. By softening focused directional sound, eliminating ambient noise and providing "quiet" pockets in specific locations, the panel can create spaces better geared toward quiet conversation. Made from an easy to modify mold, the panel features a sound-absorbing layer of felt and can be used in both walls and ceilings.

MN-IP Try and Buy

Try

- Six month trial period
- $0 fee for trial
- No US patent costs during trial

Buy

- $5,000 Conversion Payment
- 3% royalty after $1 million in product sales, 2% for MN companies

Acoustic Problems

Current technology mitigate hard-surface acoustic problems by forming repetitive, identical acoustic panels from soft, but not very durable, materials. The new variable vacuum formed system costs about the same as existing technology but employs an array of panels. In addition, users can customize acoustics by calibrating specific surfaces/areas to from one area to the next.

BENEFITS AND FEATURES OF VARIABLE VACUUM FORMED WALL:

- Effective in both walls and ceilings
- Customized acoustic environments
- Mitigates echoes and feedback from hard surfaces
- Facilitates quiet conversation

Phase of Development Pre-market validation

Researchers

Marc Swackhamer
University of Colorado Denver
Blair Satterfield